Enablers and barriers to the effective use of public-private mix in tuberculosis control within Cape Town: the private sector perspective

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DECLARATION

This research in its original form is my personal work and has never been submitted to this University or any other learning institution for an academic award. Other sources are fully acknowledged.

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LEE-ANN JULIANA JACOBS

Date_____

This thesis has been submitted for examination with my approval as the University supervisor.

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DR EDINA SINANOVIC

Date_____

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It is by the grace of God that I have had the opportunity to pursue and complete further studies on a post graduate level. For this I am eternally grateful.

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I wish to thank my father and grandmother for their support and continual prayer throughout the duration of my study.

DEDICATION

This study is dedicated to the memory of my late mother, Mrs. Diana Jacobs, who has always been my source of inspiration and encouragement. A woman who possessed great inner strength and showed me that despite the stumbling blocks life may throw my way, faith and hard work will see me through!

TABLE OF CONTENTS

Declaration	1
Acknowledgement	2
Dedication	3
List of tables and figures	6
List of Acronyms	7
List of Appendices	7
Abstract	8
CHAPTER 1: BACKGROUND	**9**
1.1 Introduction	9
1.2 Background of TB in South Africa	10
1.3 Background of the Health Sector in South Africa	11
1.3.1 The public sector	11
1.3.2 The private sector	12
1.4. The South African health sector's response to TB	13
1.4.1 The National TB Control Plan (NTCP)	13
1.5 Problem Statement	15
1.6 Rationale and Justification for Research	16
1.7 Aim and Objectives	17
1.8 Organisational structure of the research	17
CHAPTER 2: LITERATURE REVIEW	**19**
2.1 Theoretical and pragmatic arguments in favour of private sector development in health service delivery	19
2.2 What is public-private mix in TB control?	20
2.3 The cost-effectiveness of public-private mix in TB control	25
2.4 The global perspective on public-private mix in TB control	26
2.5 International findings on private providers' perspectives on the enablers and barriers to effective TB control	31
2.6 Theoretical and pragmatic arguments about incentives	34

2.7 Argument for the public funding of PPM given the externalities of TB. 37

CHAPTER 3: RESEARCH METHODOLOGY 38

3.1 Introduction 38
3.2 Study design 38
3.3 Study population and eligibility criteria 39
3.4 The sampling techniques and sample size 40
3.5 Questionnaire 41
Validity measurement 41
3.6 Data collection process 41
3.7 Data management and analysis 41
3.8 Ethical considerations 42

CHAPTER 4: RESULTS

4.1 Introduction 43
4.2 Main stakeholders in the private sector 43
4.3 The enablers and barriers to the effective use of PPM in TB control in Cape Town 46
4.3.1 The enablers 46
Direct incentives 46
Indirect incentives 47
4.3.2 The barriers to the effective use of PPM in TB control in Cape Town 48
Barriers in the public sector 48
Barriers in the private sector 49
4.4 Essential components for effective PPM in TB control in Cape Town 49
Conditions in policy and guideline development 49
Conditions in advocacy and information campaign 50
Conditions in training and research 51
Conditions in service delivery 51
4.5 Summary 51

CHAPTER 5: DISCUSSION AND LIMITATIONS **54**

5.1 Introduction 54
5.2 Main stakeholders in the private sector 54
5.3 The enablers and barriers to the effective use of PPM in TB control in Cape Town 55
5.3.1 The enablers 55
Direct incentives 55
Indirect incentives 58
5.3.2 The barriers to the effective use of PPM in TB control in Cape Town 59
Barriers in the public sector 59
Barriers in the private sector 64
5.4 Essential components for effective PPM in TB control in Cape Town 66
Conditions in policy and guideline development 66
Conditions in advocacy and information campaign 68
Conditions in training and research 69
Conditions in service delivery 69
5.5 Limitations 71

CHAPTER 6: CONCLUSION AND RECOMMENDATIONS **73**

6.1 Conclusion 73
6.2 Recommendations 74
6.3 Agenda for future research 76

REFERENCES **78**

APPENDIX **82**

LIST OF TABLES

Table 1 Practical tools/software for PPM 23
Table 2 Description of the percentage of TB in the various districts 39
Table 3 Characteristics of private providers 44
Table 4 Direct incentives for involvement in PPM in TB control 46

Table 5 Types of financial remuneration requested 47
Table 6 Choice of direct incentives 47

LIST OF FIGURES

Figure 1 WHO generic PPM structure 22
Figure 2 Geographical situation of private providers 44
Figure 3 Provision of TB care 45
Figure 4 Private sector involvement 46
Figure 5 Barriers in the public sector 48
Figure 6 Barriers in the private sector 49
Figure 7 Conditions in policy and guideline development 50

LIST OF ACRONYMS

PP Private Providers
WHO World Health Organization
TB Tuberculosis
PPM Public-Private Mix
MRC Medical Research Council
MDR-TB Multi-resistant TB
GDP Gross Domestic Product
NGO Non Governmental Organization
MTDP Medium-Term Development Plan
NTCP National Tuberculosis Control Programme
NTP National Tuberculosis Programme
PWP Public-private workplace partnership
PNP Public- non governmental organization partnership
PPP Public-private partnership
DoH Department of Health

LIST OF APPENDICES

Appendix 1 Consent form 82
Appendix 2 Questionnaire: Enablers and barriers to the effective use of public-private mix in TB control within Cape Town: the private sector perspectives 83

ABSTRACT

Tuberculosis (TB) remains a significant contributor to global morbidity and mortality, and South Africa has one of the highest burdens of TB in the world. Current WHO recommendations include the need for private practitioners to be engaged in national TB strategies. Within Cape Town South Africa, specific strategies are required to effectively involve private practitioners in TB control.

This study aimed to investigate private practitioners' perceptions of the enablers and barriers to the effective use of public-private mix (PPM) in TB control in Cape Town. It also explored private provider perspectives on the main components of PPM in TB. Private practitioners included medically trained doctors in private practices, non allopathic medical practitioners, private pharmacists, laboratory technicians and microbiologists.

The study employed the convenience sampling method. A total of 50 interviews were conducted with the use of self-administered semi-structured questionnaires.

The study found that certain enablers (i.e. direct and indirect incentives), facilitated increased willingness of private providers to participate in PPM initiatives in TB control. The main incentive was financial remuneration. Other incentives included training, the free supply of drugs, private providers improved reputation and the provision of quality assured subsidized microscopy and radiological services. Private providers also identified barriers in both sectors that currently limit their participation in PPM initiatives. The deficiencies of the current system included the need for the development of more effective health promotion campaigns, improving diagnostic services, promoting interaction between the private and public sectors and training.

The main recommendations included the facilitation of increased collaboration/communication between the staff in both sectors and strong government stewardship. Further recommendations included the development of a strategy for phased implementation of PPM TB control initiatives, pilot studies with context-specific PPM of TB care in diverse settings and their evaluation in terms of health outcomes, cost-effectiveness, equity and quality of care.

CHAPTER 1

BACKGROUND

1.1 Introduction

According to the World Health Organization (WHO), global concern about tuberculosis (TB) control has risen in the past decade as a major international health issue (WHO, 2006). High burden TB countries are also low -or middle-income nations where government-run public health services are frequently under funded and facing several obstacles to achieve adequate outcomes.

The private sector has demonstrated its growing weight as a health service provider. According to WHO (2001), the private sector has strengths which can have a positive impact on TB, if they are engaged properly. There are however also limitations in the private sector and this coupled with deficiencies in the current public health system can be barriers to the effective control of TB. Current WHO recommendations include the need for private practitioners to be engaged in National TB strategies. This involvement of private sectors in the health sector is called Public-private mix (PPM). PPM has been successful in many developing countries and besides its effectiveness as a strategy; it also has financial benefits in the control of TB in a country (WHO, 2006).

South Africa is one of several countries where partnerships between the public and private sectors have been recognized as a policy objective, with the National Treasury developing its own guidelines for public private partnerships related to design, procurement and implementation. In response to the dual TB/HIV epidemic, the national tuberculosis programme has began to collaborate with different private providers in the provision of TB treatment (Department of Health, 2002).

In South Africa private and public providers of health services, each have mixed perceptions of the other sector (Department of Health, 1997). Hence programme development to improve systematic collaboration and communication among all treatment providers will be of benefit to local TB control efforts.

1.2 Background of TB in South Africa

South Africa has one of the highest rates of TB in the world. The incidence was 600 per 100,000 in 2005 (WHO, 2007). South Africa's TB burden is exacerbated by a high incidence of HIV infection (WHO, 2006). Between 28.2% and 71.9% of TB cases in the different provinces are estimated to be HIV-positive (WHO, 2006). HIV/AIDS represents one of the most serious challenges to health and society in general in South Africa. In general, the HIV prevalence among adult TB patients is usually 2-3 times higher than among the general population. HIV is now the greatest individual risk factor for tuberculosis disease. HIV infection in a person who is already infected with TB increases the risk to develop tuberculosis disease from 10% in a lifetime to *7.8%* per year. The HIV/AIDS and the tuberculosis epidemics occur in the same age groups of the general population, the young productive age-groups of males and females. Increased TB morbidity is therefore particularly seen in the age groups where HIV has its highest prevalence. This explains why in South-Africa HIV prevention is one of the major factors for tuberculosis control. Without effective HIV/AIDS prevention, TB will continue to increase, following the trend of the HIV epidemic (Department of Health, 2002).

A survey of drug resistance in South Africa by the Medical Research Council (MRC) reported a mean rate of 1.6% MDR-TB in new cases and 6.6% in previously treated cases (WHO, 2001). Although these rates are not substantially higher than the global average, South Africa has a large absolute burden in terms of the number of Multi-Drug Resistant Tuberculosis (MDR-TB) cases, due to the very high incidence of TB. South Africa has the second largest number of MDR-TB cases in the world (of those countries included in the Global Surveillance project), reported to be between 3000 and 6000 cases (WHO, 2006). Two-year case fatality rates are around 30% to 50%, being higher in HIV positive patients. The cost of treating a case of MDR tuberculosis in South Africa is 10 to 20 times the cost of treating an uncomplicated drug-susceptible case but is probably much higher when factoring in the cost of prolonged hospitalization, cultures, and drug susceptibility testing (Department of Health, 2002).

1.3 Background of the Health Sector in South Africa

1.3.1 The public sector

The present total population in South Africa is 46.4 million with an annual population growth rate of 2.4% for males and 2.0% for females. This is the totality of the population that requires healthcare in the country. Approximately 84% of this population is almost entirely reliant on the public health sector, which is provided for by only 30% of the health care facilities in South Africa (Department of Health, 2002*).*

According to data provided by WHO, health expenditure constitutes 7,1% of the GDP. This corresponds to 'USS *396* per capita *of* which USS 184 as public health expenditure and USS *183* as private health expenditure per capita comprehensive public health budget was R 932 *(*1996-97), R 971 (1997-98) and R942 (I998-99) in 1999 Rand, according to The South African Health Review 2000 Report. Sources of funding of the Comprehensive Public Health Sector in l998/99 are: general taxation: R 30,908 million; local authority revenue: R 996 million; user fees: R 340 million; provincial government-own revenue: R 384 million, and donors: R 68 million for a total of R 32695 million (Department of Health, 2002).

The Department of Health took over a difficult inheritance in 1994. There were previously 14 different departments of health that were not contiguous with each other, budgets were regularly overspent, backlogs in hospital maintenance were massive (R8 billion), and human resources were grossly mal-distributed. According to WHO, World Health Report, (2001) South Africa's healthcare status did not even rank in the world's top 100 list.

Based on our health system responsiveness to the needs of the people, the cost of healthcare to individuals , allocation of public and private funds, overall population health and the ratio between the current state of our health and the state it should achieve, South Africa limps in at 175th place in the world. By these standards one would get better care in Bosnia (90th), Zimbabwe (155th), Rwanda (172nd) and marginally worse treatment in Somalia (179th) (World Health Report, 2000). The same WHO report ranked South Africa 57th in terms of the amount of money spent on health. This finding is backed by the South African Health Review (Healthcare, 2005). This report indicates that South Africa is spending a huge amount of money on health care. However, South Africa does not have the capacity or the proper infrastructure in

the provinces to spend this money properly. Therefore, the people at community level may not receive proper delivery of services. The same WHO report revealed that South Africa is ranked 182nd when it comes to the effectiveness of our spending, as 71% of the budget is absorbed in personnel.

In light of the dual impact of HIV/AIDS and TB, this trend is set to continue, especially when South Africans start feeling the impact of HIV/AIDS on our pockets. According to a study compiled by the Center for Applied Business and Economic Studies at the University of the Witwatersrand, HIV/AIDS will mean that companies will be forced to sell out, because of increased medical and death benefits and higher training costs due to increased amount of staff turnover and absenteeism (Brown, 2003). These costs will be passed on to the consumer and hence reflect in both the producer-price inflation and consumer-price inflation figures. This means higher interest rates, projected to increase by 3% to 4% over the long term as a direct result of HIV/AIDS (Brown, 2003).

1.3.2 The private sector

The private health care sector of South Africa is in a much better state than the public health sector. The private health sector owns about 70% of all health care facilities in South Africa and only provides health care to 16% of the population (Brown, 2003). The Hospital Association of South Africa looks to these private hospitals as our "National Assets", which employ over 60% of all South Africa's doctors, 80% of all dentists and pharmacists, and trains over 60 000 nurses per year (Brown, 2003). The private sector is funded by a mix, including out-of pocket expenditure, medical aid schemes and the public sector (i.e. government subsidized health schemes such as GEMS). It is clear that there exist gross inequalities between the public and private sector. In South Africa, private health care accounts for 50 percent of the total health care spending, of which 48% is out-of -pocket expenditure. It was found in a national household survey in 1995 that, for both urban and rural subgroups in the lowest income categories, there was considerable use of private practitioners – 25% of the urban poor and 13% of the rural poor reported to be seeking private health care in the event of a sickness (WHO, 2001).

The private for-profit sector consists mainly of general practitioners and medical specialists working in private hospitals. They are estimated to cover 20% of the population. The private not-for-profit sector (mainly non-governmental organizations (NGO's) plays a vital role in health

issues at the community level (especially in relation to cancer. tuberculosis, HIV-AIDS, mental health and disability).

In terms of TB control, provision of care within the private sector, a private company, Lifecare who is funded by Government offers hospital care for TB patients. The NGO SANTA also provides hospital care for TB patients with governmental funds.

1.4. The South African health sector's response to TB

1.4.1 The National TB Control Plan (NTCP)

The National Treatment Plan (NTP) includes general practical guidelines for the effective treatment of tuberculosis. These strategies and frameworks was developed and prepared by World Health Organization's Stop TB Department with the help of the International Union Against Tuberculosis and Lung Disease and experts worldwide. Treatment of TB is the cornerstone of any NTP (WHO, 2007).

The National Tuberculosis Control Programme (NTCP) is specifically a South African plan for TB control and was established based on the WHO's NTP, which includes a focus on Directly Observed Therapy Short-course strategy (DOTS] of WHO. In March 2000 ministers of the 22 high burden countries (countries that together count for 80% of the burden of tuberculosis in the world) called for accelerated expansion of control measures and for increased political commitment and financial resources to reach the targets of global TB control by 2005. The Government of South Africa was one of the signatories of this Declaration. A Global DOTS Expansion Plan was developed and this Plan included two pillars; the development of national Medium Term Development Plans (MTDP], and the building of partnerships.

<u>MTDP 2002-2005</u>

The Medium Term Development Plan 2002-2005 of the National TB Control Programme (NTCP) provides a template for mobilization of human and financial resources needed to expand tuberculosis control as part of the national health system in order to achieve the targets the country committed itself to towards its own community and to the international community.

The objectives of the MTDP are taken from the objectives of the NTCP, adapted to the time frame of 2005 and take into account internationally agreed objectives.

The overall objectives of the NTCP are:

- To reduce mortality, morbidity and transmission of the disease.
- To reduce human suffering and the social and economic burden families, communities and the country bear as a consequence of the disease.
- To establish optimal co-ordination and co-ordinated action with the HIV/AIDS&STD Programme.
- To prevent the development of drug resistance.

The short term objectives included the achievement of a cure rate of 80 - 85% among sputum smear-positive TB cases detected, to reduce the interrupter rate to10% and the transfer rate to < 5%, to detect 70% of the estimated new smear-positive TB cases: and to achieve DOTS coverage to all Districts.

The NTCP core package includes:

- a well accessible and efficient laboratory network functioning
- an adequate supply of laboratory materials; treatment
- regular high-quality support and supervision by provincial and district staff
- adequate record keeping systems
- good referral systems in place
- adequate and reliable funding
- uninterrupted drug supply
- well accessible treatment services utilizing DOT for at least the initial two months
- the presence of sufficient well trained staff
- simple, basic infection control measures in place in relevant institutions
- a reliable drug resistance surveillance system
- the development and implementation of sector and area specific DOTS programmes in special populations (mines. prisons, major industries, migrant workers, etc).

The essential activities within NTCP includes

- pre- and-in-service training at all levels of the system
- supervision, which includes continuous evaluation, guidance, support and on the job training
- recording and reporting
- quality assurance

- advocacy aims to win the support of key constituencies in order to influence policies and funding
- information, education and communication
- programme management at all levels of the NTCP (facility, district, province and national) and involves both technical and organizational activities
- staffing- adequate quantity and quality of staff

.

The NTCP has four levels: national level, provincial level, district level and health facility level, all within the general health services. The national TB unit plays the role of co-ordination, facilitation and evaluation of TB services for the whole country. The provincial level is responsible for implementation and budgeting. The district level is the key level for the management of primary health care and is the most peripheral unit of the health services administration. The health facility level is within a district. This level of primary care includes district hospitals, health centres, dispensaries and clinics within a district (Department of Health, 2002).

1.5 Problem Statement

According to the City of Cape Town/ Metropole Region TB control programme, TB in the Western Cape, particularly in Cape Town, continues to be amongst the highest in the world, exacerbated by the HIV/AIDS pandemic (Department of Health, 1997). Whilst this programme recognizes that a challenge continues to centralize around identifying the best practices, that make the most of the available resources and to integrate the provision of care, there is very little mention of collaboration with the main stakeholders in the private sector. There is only mention of three TB NGO's, namely TB Care, Santa Cape Town and Santa Western Cape that deliver community-based treatment to TB patients in the City. There is thus a need to further involve the private sector in strategies to control TB, as by remaining aloof from the private health sector; this treatment programme could be hampered in their case detection efforts. A reluctance to actively involve the private sector may further facilitate poor management practices in the private health sector such as improper diagnosis and treatment, and the absence of follow-up could not only dilute the epidemiological impact of the DOTS programme but could also contribute to a growing incidence of hard-to-treat MDR- TB (Department of Health, 1997).

1.6 Rationale and Justification for Research

Private providers (PPs) outnumber public health-care providers in some countries and often offer better geographical access and more personalized care than public facilities (WHO, 2003). This has lead to growing interest in understanding how PPs could be effectively involved in improving the outreach of public health programmes. However the clinical management practices of PPs are often inadequate. PPs have shown to prescribe inappropriate treatment for diseases such as TB, misuse anti-biotics and rarely monitor the effects of treatment or maintain records. A second reason for growing interest in the private sector is the need to address the potential negative impacts of anti-biotic resistance caused by inadequate management practices such as the development of antibiotics and the high costs of substandard care of poor people. In 2000, DOTS programmes detected less than 30% of the estimated new TB cases (WHO, 2006). Therefore innovative approaches for increasing case detection need to be identified and implemented. Meaningfully involving PPs in TB control would be useful to improve the uneven TB management practices of PPs and would improve access to good TB care in settings where PPs offer better geographical coverage (WHO, 2006). Private providers also offer major opportunities to further TB control. For example, a private doctor is a valuable resource, located close to and often trusted by the community. By involving them, National TB Programmes (NTPs) can increase case detection and notification. Since many TB suspects first approach a neighbourhood private practitioner, there is an opportunity to reduce diagnostic delay with a concurrent reduction in transmission. By enlisting PPs, NTPs can enhance patient access and acceptance, thereby improving treatment outcomes. There is also the potential to share service delivery and thus moderate the workload on frontline health workers. There is also an opportunity to build a degree of long term sustainability in the TB control efforts, provided that the government provides a conducive policy environment for DOTS adoption such as incentives and other inducements (Uplekar, 2003).

Given the impact of the private sector on the public sector, policy makers need to capitalize on the accessibility and popularity of this sector. There are often divergences between private sector actors and public health policy makers in terms of goals, constraints and expectations. It is thus imperative to have the involvement of powerful stakeholders. The role of private providers should be as collaborators in the endeavour to improve coverage by public health services, with the idea of public and private sectors offering complementary services. It is thus imperative to actively engage with these private providers to gain insights into their expectations

from the National/Regional Treatment Programme and the extent to which they can collaborate effectively. More specifically there is a need to find what private providers regard are the "enablers (i.e. the capabilities and resources that contribute to the success of a programme) and barriers to the effective use of public-private mix in TB control within Cape Town", with a specific focus on the following main areas that WHO (2006), considers are important components of the partnership between the public and private sector:

1) policy and guideline development
2) advocacy and information campaign
3) training and research
4) service delivery

This research should contribute to effective policy making, which would facilitate a better design and implementation of public-private mix (PPM) in TB Control.

1.7 Aim and Objectives

The aim of the study is to explore enablers and barriers to private sector participation in TB control in Cape Town.

The main study objectives are:

1) To explore the main stakeholders in the private sector that could be active participants in TB control in Cape Town.
2) To ascertain what these private providers think are the enablers and barriers to their involvement in TB control.
3) To explore their perspectives on the main areas of public-private partnerships in TB control, namely policy guideline development, advocacy and information campaign, training and research and service delivery.

1.8 Organisational structure of the research

The rest of the work is structured as follows. In the next chapter, the review of relevant and leading literature in the area of private sector development in health service delivery and the specific use of public-private mix in addressing the major public health issue of TB is provided. This chapter also provides a brief review of the economic theory on incentives. Chapter three outlines the methodology of the research including the data requirements and source, the

sampling techniques employed and procedure for handling the data obtained from the administration of questionnaires. The results from the analyses are then presented in chapter four. The fifth chapter discusses the results of the findings providing empirical justification and implications of the results while the last chapter provides an overall conclusion, plausible policy recommendations and caveats for further research.

CHAPTER TWO

LITERATURE REVIEW

2.1. Theoretical and pragmatic arguments in favour of private sector development in health service delivery

Following a review of work, analyzing and evaluating private sector development in developing countries, the theoretical arguments in favour of this development vary from the neo-classical economic theory to institutional economics. The neo-classical economic theory states that "the benefits of private sector development are as a result of a concurrent increase in competition rather than a change in ownership" (Bennett et al, 1997). It is thought that competition may result in providers improving on their services to yield a competitive advantage over other providers in the same market, which thus benefits the consumer. Increased competition can lead to pressures to lower prices and may serve as a means of consumers being protected from being exploited (Palmer et al, 2003). Institutional economics focuses on property rights and suggests that private ownership may have an intrinsic effect by providing incentives to providers. Providers may be keen to provide efficient services to consumers, if they know the consequence results in higher profits whereas generally the lack of property rights in the public sector leads to inadequate incentives for efficient behaviour (Bennett et al, 1997). Political theory's rationale for a re-alignment of the state is the rights of individuals to trade and to purchase the goods and services upon which they place high priority (Bennett et al, 1997).

Pragmatic arguments in favour of private sector development are that through the engagement with the private sector, the public sector may be able to focus on the poor, while at the same time work towards a less segmented system that could yield benefits in terms of better access, improved equity and social cohesion (Bennett et al, 1997). The rapidly growing private sector recruits staff from the public sector, and although this weakens the public services it opens up opportunities for the use of private sector resources to promote public health objectives (Mills et al, 2002).

If the growth in the private sector is accompanied and partially driven by economic growth then tax revenue will increase and if the health budget remains a constant proportion of total government expenditure, public resources available to the health sector should increase (Mills

et al, 2002). Therefore an outflow of patients to the private sector will allow an increase of resources available to the public sector. However if the health budget does not remain a constant proportion of total government spending, less resources will be available to the public sector. This will result in the public sector having to stretch its resources thus weakening the capacity of the public sector. This reduces the quality of care that the public sector can provide (Mills et al, 2002). This is evident in Zambia, where the government's budget for health fell by one-half and this resulted in the government functioning on insufficient resources available to meet its operating costs (Bennett et al, 1997). The private sector will therefore expand its activity to meet the demands that the public sector cannot. The public sector's pro-active use of public-private partnerships is a means of increasing its resources available to the public sector, enabling it to improve on the quality of care (Mills et al, 2002).

According to Brugha et al (1998), the reasons for the increase in the pattern of utilization of the private sector have been linked to issues of acceptability, including greater case of access, shorter waiting periods, longer or flexible opening times, better availability of drugs and staff, more sensitive health workers and greater confidentiality in dealing with diseases such as TB and sexually transmitted diseases which carry social stigma.

2.2. What is public-private mix in TB control?

There are many ways of defining the term "public" and "private" (Wang, 2000). In general, however, the 'public sector' includes organizations or institutions that are financed by state revenue and that function under government budgets or control. Private sector comprises those organizations and individuals working outside the direct control of the state (Bennett, 1991). Broadly the private sector includes all non-state actors, some explicitly seeking profits (for-profit) and others operating on a non- profit (not-for-profit) basis. The former are conventionally called 'private enterprise'; the latter as 'non-governmental organizations' (NGOs). In health sector, for-profit providers may include individual physicians, diagnostic centres, ambulance operators, blood banks, commercial contractors, polyclinics, nursing homes, hospitals of various capacities, etc. They may also include community service extension of industrial establishments, co-operative societies, community-based organizations, religious and philanthropic trusts, professional associations, self-help groups, citizen forums and other types of non-state organizations.

Paoletto (2000) lays down some of the enabling conditions for the success of a partnership as:

- A clear understanding between the partners about what the mutual benefits are;
- A clear understanding of the responsibilities and obligations between the partners;
- Strong community support;
- Need for some catalyst to start the process of partnership (may be an individual, a donor, a compelling vision or even a political or economic crisis);
- Stability of the political (government) and legal climate (laws);
- Regulatory framework that is followed and enforced;
- Capacity and expertise of the government at different levels in designing and managing contracts (partnership);
- Appropriate organizational and management systems for partnerships;
- Strong management information system;
- Clarity on incentives and penalties

PPM in health care refers to the formal and contractual relationships between the two sectors (Goudge, 1999). The mix can be various forms depending on who pays and who provides health service. The different forms of public and private sector mix are:

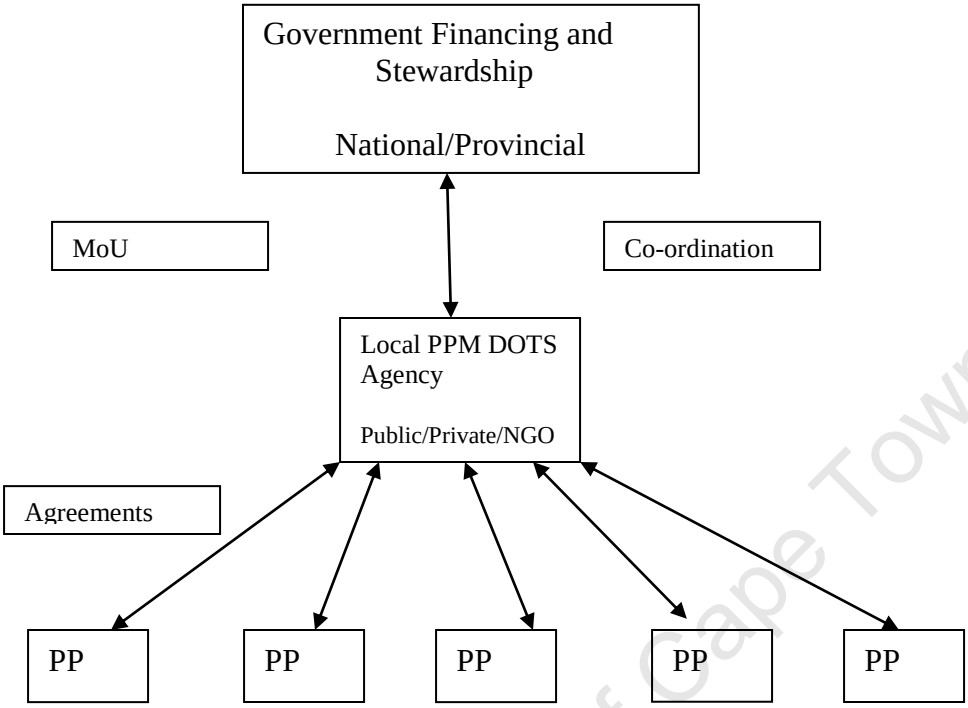
- public sector finances and private sector provides health care (the government finances private providers through contracting or subsidizing private care providers).
- private sector provides care for private patients using public facilities (leasing out beds/wards for private patients, where private providers pays to use public facilities, or some form of limited private practice , where public sector doctors are allowed to spend a specified number of hours in private practice).
- private sector finances and public sector provides health care (private agents finance health care services which is delivered by public agents, e.g. user fees).

Whether or not these forms of mix do function, depend on the capacities of both public and private health care services within a particular area.

PPM in TB control has been defined by WHO as strategies that link all healthcare entities within both the private and public sectors (including health providers in other governmental ministries) to NTP's for the expansion of DOTS activities (Dewan P et al, 2006).

WHO has developed a generic PPM structure emerging from PPM DOTS field projects (WHO,2003). See figure 1 below.

Figure 1. WHO generic PPM structure



The National government formulates a PPM policy in consultation with the stakeholders. A co-ordination mechanism helps to bring the public and the private sectors together, agree on implementation schemes and maintain dialogue. A local "franchisee" DOTS agency- public, private or voluntary – implements DOTS through a network of willing health care providers in an area.

According to WHO (2002), the crucial areas for the implementation of PPM in TB control include: government commitment, funding, sufficient time for dialogue and planning with all relevant stakeholders, clearly defined role division and responsibilities, initial "hand-holding" and ongoing supervision by the NTP, simple tools to improve referral and information systems and the availability of an interface such as a local nongovernmental or professional organization, into the operational plans.

Uplekar (2003) refers to common essential elements of PPM DOTS that have emerged from known field based initiatives. In table 1 below, he refers to these as the practical tools/software for PPM that helps to commence, enhance, monitor and evaluate the collaboration.

Table 1. Practical tools/software for PPM

Purpose	Tools
Training	Sensitization tool for private providers Sensitization tool for NTP staff
Diagnosis	Referral form for sputum microscopy Case notification form Feedback/Back referral forms
Treatment	Form of referral for diagnosed cases Adaptation of treatment card Transfer form for patients Form requesting supply of drugs Form for retrieval of defaulter tracing
Monitoring	Quality monitoring forms Minor adaptations of NTP registers Adaptations of quarterly report forms Evaluation of indicators for PPM DOTS
Agreements	Memorandum of Understanding Letter of Agreement

For TB control in any population, all TB patients should have access to care, regardless of the providers they choose to seek care from, and the public-private mix approach to TB control can be used as an important solution. An example of a public-private mix model (Balasubramanian , 2006), that can be applied within the TB control programme is as follows:

- Setting and profile of the private and public sectors in the study area (Tiruvallur South India):

  The private sector consisted of 52 private medical practitioners in modern medicine (allopaths), 26 indigenous systems of medicine (non-allopaths) and private pharmacies which provide medical care for a fee. There was 1 non governmental organization. The public sector consisted of two rural hospitals with in-patient facilities and 15 peripheral health institutions, including seven that offer diagnostic services in the government sector. Free TB diagnosis and treatment was offered in the government sector.

- Procedure in developing the public-private mix

  An initial situational analysis was performed by listing all the private medical practitioners (allopaths and non-allopaths) and the private laboratories that offered diagnostic services. Physicians from the Tuberculosis Research Centre provided private providers with information about the NTP in the meetings organized through the Indian Medical Association. They interacted on a one-one basis and briefed private providers on the public-private mix model. Focused group discussions were organized among the private providers to develop a public-private mix model. Sputum examination forms were provided in duplicate (in a referral book) to the private providers, who filled in two forms for each TB suspect and referred the suspect with one form to a government laboratory or private laboratory. The duplicate form retained by the PP was collected by the Tuberculosis Research Centre staff on the monthly visits. Arrangements for patients to go directly to the hospital laboratory were made, bypassing routine out-patient formalities. At the microscopy units, referrals from private providers were recorded by laboratory technicians as "referred by the private providers" in the laboratory registers. For every suspect referred, three sputum smears were examined and feedback letters were sent back to the private providers. For all diagnosed patients, treatment (including preparation of the treatment card) was offered free of charge by the government, physicians as per NTP guidelines. The treatment card was given to the private provider by the Tuberculosis Research Centre staff with an anti-TB treatment box (containing drugs for the full course of treatment). The private providers chose the DOT treatment centres and providers for their patients (either themselves, community providers or Primary Health care facilities) with the consent of their patients .DOT providers (clinics or communities) were given on-the-spot training in administration of drugs including documentation, by Tuberculosis Research Centre staff. For patients who chose to take their treatment at the Primary Health care facilities, arrangements were made to send the treatment cards to the respective Primary Health care facilities.

- The role of private providers

  The participation of private providers was voluntary and by verbal consent. The private providers charged fees for their consultation alone.

- The role of private laboratories

  Tuberculosis Research Centre staff trained all the private laboratories staff in sputum

smear microscopy as per NTP guidelines. The NTP state laboratories provided supervision and maintained quality control of the private laboratories.

- Monitoring

  The private providers and private laboratories were met with individually at least once per month by a Tuberculosis Research Centre physician/staff for feedback and data collection.

- Results

  Of 489 TB suspects referred by private providers, 24 percent were smear-positive compared to 10 percent of 15278 self reported patients. The annual average case detection rate increased from 66 to 75 per 100 000 population.

2.3. The cost-effectiveness on public-private mix in TB control

Wojtczak (2002) defines effectiveness in the health field, as a measure of output from those health services that contribute towards reducing the dimension of a problem or improving an unsatisfactory situation. The evidence for the cost-effectiveness of PPM in TB control is reflected in a study in South Africa (Sinanovic and Kumaranayake, 2006). In this study three different models of DOT provision were evaluated for different target groups: purely public, public-private workplace (PWP), and public-non-governmental organization partnership (PNP). In the public model, patients were diagnosed and treated in public clinics, with direct observation undertaken in the public health facilities by health workers following national treatment guidelines. The PWP model represented a partnership between provincial TB programmes and mining companies where the employer's occupational health services were either reimbursed per patient day or received free drugs for each TB patient treated in their clinics. The PNP model is a partnership between provincial TB programmes and NGOs providing community-based DOT in which these NGOs are paid a monthly sum per patient to manage community-based TB programmes. In this model, patients are diagnosed and monitored in public clinics for the first 10 days. Subsequent treatment is directly observed by community health worker 'treatment supporters' in the community. In addition to the funding from the provincial TB control programme, these NGOs receive funding from other sources such as charities and donors. In return for payments from provincial TB programmes both private partners are required to follow national treatment guidelines, complete and submit standardized quarterly reports to district TB coordinators, and liaise with district public health facilities. The results of this study demonstrated that increased community involvement (i.e. PNP) and

availability of treatment at workplace (i.e. PWP) were more affordable to the public sector. The effectiveness was also better in the public-private partnership (PPP) models, suggesting that the public-private models of provision are more effective than the purely public model

The new costs associated with the community-based treatment to the public sector were small in comparison with the cost of DOT in public clinics. The incentive paid to community treatment supporters (on average US$ 0.3 per visit) was much lower than the average cost of a clinic visit (on average US$ 3.5 per visit). The availability of the treatment at a workplace and in the community resulted in substantial savings to the patient. In addition to the cost reduction to the public sector, by providing TB treatment to poorer community members and employees, the treatment became more accessible and convenient for patients in both study populations reducing costs to the patient by 64%–100% (Sinanovic and Kumaranayake, 2006).

This study further promotes the need for the increased collaboration with the private sector as this could contribute to improvements in affordability and efficiency of TB treatment.

2.4. The global perspective on public-private mix in TB control

The effectiveness of PPM has been demonstrated in other countries. In a study conducted in the year 2000, the Indonesian Medical Association explored the TB case load, management practices and willingness to participate in DOTS implementation among 187 general practitioners practicing in three different provinces. The study highlighted that 82 % of private practitioners were willing to participate in DOTS implementation. If supplied free, 50% were willing to provide anti-TB drugs to their TB patients and most of them (92%) would not expect to make any profit from them (WHO, 2003).

A study by the secretary general of the Indonesian Medical Association showed the potential private clinics have in contributing to case detection. In a case-control study, 15 doctors in the intervention area, who were primed to follow NTP guidelines through one-one sessions of a couple of hours each, notified 64 sputum smear positive cases in less than 6 months (WHO, 2003).

From the Indonesian example, it was found that the quality of DOTS implementation in the private sector depends on: a) quality of DOTS locally within the public sector b) capacity of the

public health services to train and supervise the private sector, c) local leadership and willingness within the private sector. It was found that for sustained private sector involvement, some knowledge and information gaps needs addressing. These include urban-rural differences in the role of the private sector in TB control, context-specific models for involving individual and institutional private providers, appropriate incentives and enablers for private sector involvement, resource requirements for PPM DOTS, costs and cost-effectiveness of PPM DOTS, place of DOTS in current medical curricula and training young medical graduates on DOTS, etc. These information gaps may be addressed "in parallel" through programme based, action orientated, operational studies and programmes (WHO, 2003).

In 1994 in the Philippines, public-private sector collaboration in TB control strengthened since the establishment of the Philippine Coalition Against TB (PhilCAT). This organization consists of members from both the government and non-government organizations. There are four broad areas of partnership/collaboration between the private and public sector which encompasses (Mantala, 2003):

- policy and guideline development, e.g. a strategic plan on TB under the health sector reform agenda that specifically includes public-private sector collaboration as a major strategy. These strategies include:1) improving the supply side through the expansion and maintenance of quality DOTS strategy in the pubic sector and the institutionalization of public-private sector collaboration on TB, 2) improve the demand side through systematic information campaign and 3) secure adequate financing for TB services through the multi-year budget and social health insurance scheme.
- advocacy and information campaign, e.g. World TB Day every 24 March. PhilCAT members signed a memorandum of agreement supporting DOTS as a strategy. The DOH leads in the national information campaign every August.
-training and research, e.g. many non governmental organizations and professional organizations conduct training courses or orientation on TB as part of the educational programme.
- service delivery, e.g. private practitioners, mainly radiologists and internists, participate in the TB diagnostic committee organized by NTP, to validate the interpretations of radiological findings referred to health centres. Microscopy centres of the rural health centres are used by private practitioners for diagnostic services.

Formally involving PPs in implementing DOTS has been piloted recently in different settings

under the guidance of the STOP TB department of the WHO. This was done under the development of the developed framework for public-private mix in TB control. The study compared four PPM projects and the objectives were to compare the processes and outcomes of the four PPM project sites, to correlate differences among sites with the intervention strategies chosen and the structural conditions and to identify the factors that make PPM work. The four projects were set up in New Delhi, India; Ho Chi Minh City, Viet Nam; Nairobi, Kenya and Pune, India. The PPM projects were launched in low income settings with a high TB burden and a large private health-care sector with weak referral and notification links with the public sector. In this study private physicians, pharmacies, chest specialists, private nursing homes, allopathic and non-allopathic PPS were targeted (Mantala, 2003).

Differences across the four projects concerned mainly the use of free drugs and direct and indirect financial incentives. The NTP used the distribution of drugs free of user charges as leverage over PPS in New Delhi and Pune, by making drug distribution contingent on adopting DOTS principles. Free drugs could also be seen as an indirect financial incentive for PPs that could contribute to their willingness to participate. Some participating PPs reported that the opportunity to provide some subsidized services for low-income patients groups was a business advantage, since it improved their reputation in the community and thereby increased attendance. However, several private TB specialists in Ho Chi Minh City did not share this opinion; drug sales were a main source of their income and therefore they perceived free TB drugs as a financial threat. This was one reason why free NTP drugs were not used in Ho Chi Minh City. Private providers reported that access to diagnostic facilities; educational activities and supervision were other potentially important incentives for participation. Direct financial incentives were used in Ho Chi Minh City only and were associated with improved diagnosis or treatment or perceived as important incentives by PP's themselves (Mantala, 2003).

Experience from these four PPM project sites showed that working collaboration can be established with PPs in low income countries with a high TB burden. PPs can contribute to improving case detection, achieving acceptable treatment results and provide affordable treatment of high quality to poor people. This was demonstrated in the New Delhi case, where it was indicated that it is particularly urban areas which have promising potential for PPM DOTS due to the high concentration of private providers and the ready availability of private institutions for interface with individual providers (Lonnroth K et al, 2004). In Nairobi a group of five city-based chest physicians treated 173 cases with 83% success rate and referred an equal number

to the NTP within 13 months of starting operations. In Ho Chi Minh City , 154 participating PPs referred 1004 suspects to the NTP and notified 314 cases of which 215 were sputum-smear positive. There was an 18 percent increase in the case detection attributable to involvement of the private providers. In a rural project in Pune, 24 PPs referred 77 suspects and notified 51 cases in the first project year (Uplekar, 2003).

In Ahmedabad and Jamnagar in India, the frontline programme staff succeeded in making the PPs in the area hold treatment boxes (a full course of treatment for a designated patient), undertake direct observation of treatment, assist in defaulter tracing and maintain essential records without charging any fees to their clients. In a 12 month period, 87 PPs successfully managed 200 TB patients. Some of the motivators for collaboration included the fact that the NTP provided free drugs, their offering a service to a few TB patients in their practices, could be regarded in other ways; as patients and their families then become their permanent clients for all health care problems (Uplekar, 2003). In Delhi, India, the local Delhi Medical Association implemented a project supported by the Ministry of Health to try out graded involvement of PPs in DOTS implementation. PPs contributions ranged from simple referral of cases to the NTP to implementing DOTS totally in an area through a network of private hospitals and clinics. In the very second year of the project in one of the intervention areas covering half a million population, there was a 58% percent increase in the number of new sputum AFB positive cases notified and a 131% increase in all types of cases clearly attributable to private provider involvement. Treatment rates were an impressive 81% (Uplekar, 2003). In seeking collaboration with PPs, these and other projects clearly demonstrate what is possible and how.

The Lalitpur Muncipality in Nepal, is another prime example of how public-private partnerships can be utilized to deliver the internationally recommended strategy DOTS for the control of TB. In this instance it was estimated that 50 percent of patients were managed within the private sector. The quality of care for TB patients provided by private practitioners was described as being poor, leading to delayed cure, increased numbers of chronic transmitters, and drug resistance, and hence to an increasing incidence of TB.

A public-private partnership for the control of TB was hence developed. Here private practitioners diagnosed TB, NGO's were responsible for the direct treatment and tracing of patients who missed appointments and the Nepal NTP was responsible for the training and the provision of drugs. This partnership was evaluated through baseline and follow-up surveys of

private practitioners, private pharmacies and private laboratories, together with records kept by the Nepal NTP (James et al, 2005).

In the first 36 months, 1328 patients with TB were registered in the public-private partnership. Treatment success rates were greater than 90 percent and less than one percent of patients defaulted. Case notification of sputum positive patients in the study area increased from 54 per 100 000 to 102 per 100 000. The numbers of patients with TB started on treatment by private practitioners decreased by more than two-thirds, the number of private pharmacies that stocked anti-TB drugs by one third, the number of pharmacies selling anti-TB drugs by almost two-thirds and sales of anti-TB drugs in pharmacies by almost two thirds. Private practitioners were happy to refer patients to the public-private partnership. This demonstrates that a combination of the strengths of the private practitioners, non-governmental organizations, and the public sector in a public-private partnership can be used to provide a service that is liked by patients and gives high rates of treatment success and increased rates of patient notification.

In South Africa, the use of non-allopathic practitioners is a reality. PPs should therefore also include private practitioners from non-allopathic medicine. This has proven to be a successful collaboration in addressing major public health issues such as TB. As patients often have to visit the hospital for taking observed treatment, but this often requires them to travel long distances. The use of private providers could therefore address issues of access. In an urban area in India, nine private practitioners of non-allopathic medicine, including five with no qualification, two paramedical staff, a private pharmacist and a worker in a private laboratory were trained as per programme guidelines before being involved as treatment observers in the DOTS-based Revised NTP and supervised by the TB unit supervisory team. They were not given any financial incentive. During 2002, they managed 185 TB patients (85 percent of the cases in urban area) and amongst the 63 new smear-patients, the cure rate was 84 percent. Over a six month period, 6 percent of the total new smear-positive patients detected in the area were referred by these practitioners. The results suggested that non-allopathic practitioners and paramedical staff from the private sector can make a significant contribution to TB control, by increasing case detection and treatment observation (Singh et al, 2005).

There are however, also barriers to public-private collaboration in TB care provision (Uplekar, 2003). Within the public sector they are:
-preoccupation with DOTS implementation within the public sector

-prejudices about the profit motive and the behaviour of PPs
-lack of information on the private sector
-weak or absent regulatory mechanisms
-absence of precedents
-great reluctance to initiate collaboration

Within the private sector the barriers include (Uplekar, 2003):
-inadequate training and orientation
-technical doubts about NTP guidelines
-doubts about quality of care within NTP
-largely unorganized, liaison and interaction challenging
-low (or no) priority to public health functions, not remunerative
-genuine limitations to undertake non-clinical tasks such as defaulter retrieval.

After creating a mutual willingness and understanding to work together there are common essential elements that helps to commence, enhance, monitor and evaluate collaboration between the public and private sectors. These include proper orientation of PPs on DOTS, agreements, referral routines and records (Uplekar, 2003).

2.5. International findings on Private providers' perspectives on the enablers and barriers to effective TB control

Indonesia has a significant private health sector that accounts for approximately 63% of total national health expenditure and is believed to manage approximately one third of all TB patients. The WHO-recommended DOTS strategy is reported to cover 98% of the population in Indonesia. The NTP is run from local clinics, called puskesmas, which provide free medication for patients with smear-positive TB. Patients can also receive free medication if diagnosed in the private sector.

A study was conducted explore private practitioners' perceptions of barriers to the treatment of patients with TB in Bali, Indonesia to inform strategies for future programme development (Watkins et al, 2006). In this study, Private practitioners are defined as medically trained doctors who perform some private fee-for-service practice outside the public health service. It

includes the recruitment of doctors who worked both in mixed private-public practice and exclusive private practice, as well as those from both generalist and specialist backgrounds.
Semi-structured interviews were conducted with private practitioners who treated TB patients in their private practices. They then identified the main barriers to improved TB control within the following four areas:

- *patient non adherence to treatment*

  Low levels of patient adherence to treatment were described by all participants as a major difficulty and as 'the main problem with treating TB in private practice'. The failure of patients to adhere to treatment was most commonly attributed to poor levels of awareness about TB within the general population, including both awareness of presenting symptoms and understanding how to prevent the disease.

- *limitations of public services*

  Private practitioners believed that there were a number of specific barriers to successful TB control associated with the existing public health services. This included the lack of systematic health promotion efforts aimed at increasing community awareness of TB. The quality of TB treatment and control services from public clinics and hospitals was given a mixed assessment by the interviewees. Participants believed that as a result of a poor level of training of puskesmas staff, DOTS was 'not well done' as staff 'don't follow the steps that should be followed' and 'don't understand about compliance', resulting in low cure rates. The poor quality of the available microbiological diagnostic services was seen as a major barrier to accurate diagnosis and accessing free treatment. Concerns were also expressed over the quality of the generic medications provided by the public clinics as they are 'very cheap and . . . the concentration is not the same'. These were perceived as being of a lower quality than branded medicines that are not available free of charge. Interviewees believed that the inability to access free treatment from puskesmas for people who are not registered local residents was another important limitation of the current public system.

- *poor public-private integration*

  Private practitioners with more limited exposure to the public system generally described less integration with the public system and had poorer knowledge about what the public system offered and how it might be utilized within their practice. Private practitioners who had little interaction with the public sector would not routinely offer their patients free medications or other services from the public programmes, and often had a lower level of trust in the level of service provided by the public programme.

- *limitations of private services.*

  These private practitioners also reported difficulties with accessing continuing medical education: Interviewees identified several deficiencies in the management of TB patients within the private sector. The lack of capacity for private practitioners to successfully monitor patient treatment was considered a major limitation of the services offered. This lack of capacity for patient follow-up was associated with a general lack of resources, poor monitoring systems and a lack of time to dedicate to education and follow-up.

This study identified both strengths and weaknesses for TB control in the private sector, as well as considerable variations in perceptions and practice among private practitioners. The development of strategies to address these difficulties and utilize the inherent strengths of both public and private practitioners will be essential for improved service provision and TB control in Bali.

The Philippines is one of the few countries with a high TB burden that has developed a private–public mix project to tackle TB that includes a DOTS-plus model to treat MDR- TB cases. A study in the Philippines (Potero,2003), was conducted to investigate the knowledge, attitudes and perspectives of the Filipino private physicians on TB control issues in the Philippines and their implications for future governmental public health policies.

The Philippines bears the world's seventh highest TB burden. TB is the fifth most frequent cause of morbidity and mortality in the whole nation (National Statistical Coordination Board 2001). In the 1990s the Filipino Department of Health (DoH) launched a new NTP that included the objectives contemplated in the DOTS strategy as its main goals. This programme guarantees free TB diagnosis and supervised treatment for every adult with active TB. These activities take place mainly in a well structured network of governmental urban and rural health units scattered across the country. Non-specific measures were designed within the NTP to target those TB cases identified by the private health sector, despite the role of the private health sector in the Philippines, where 63% of hospitals and 47.7% of total bed capacity are in private hands. Health expenditures are mainly from private sources (57.2%): out-of-pocket funds (46.2%) followed by governmental funds (37.9%) and social insurance pools (4.9%).

As part of this study they specifically explored the attitudes of PPs towards;

- *obligatory case report of TB patients*

Half of the PPs (51.5%, n ¼ 1355) did not agree with the obligatory case reporting of new TB cases to the DoH.

- *willingness to collaborate with the NTP*

  83.3% of the physicians expressed their willingness to collaborate with the NTP; 90.3%, n ¼ 1129 of them wanted to be rewarded for this. 77.3% of the PPs mentioned monetary compensation, 18.2% refreshment courses on TB control, and 4.5% other alternatives.

- *conditions required for the private–public collaboration*

  These included; i) improved public sector financing with improvements in the quality of care; ii) the strengthening of the education on TB control among the general practitioners that might be the first medical contact of the TB patient; iii) improvements in the procurement and distribution of free anti-TB drugs.

- *what private providers considered weaknesses of the NTP.*

  They found that the weakest point of this policy was the diagnosis based on sputum microscopy examination (52.9%), followed by the management of TB patients with smear negative sputum examination (19.5%), anti-TB drug issues (10.2%), treatment options (9.3%), and other topics (1.8%).

2.6. Theoretical and pragmatic arguments about incentives

According to Le Grand (2003), to offer something in exchange is to make an effort to understand the needs and wants of the other party to the potential exchange, and to persuade them what is on offer will meet those needs or wants.

In the design of policies, policy-makers need to consider how the people who implement these policies are motivated. There are two types of motivation, one intrinsic or internal to the individual and other extrinsic or external (Rogers, 1997). In the workplace, intrinsic factors include interest or enjoyment in work for its own sake, and extrinsic factors include wages and salaries, promotion, the threat of losing one's job and direct commands or orders. It is argued that there may be a trade off between the two types of motivation such that too heavy emphasis on extrinsic motivation can drive out intrinsic motivation. So motivations activated by external factors such as monetary incentives or direct orders can crowd out motivations that are internal to the individual such as more altruistic concerns. In particular, they will do so if they are viewed as controlling by the individuals concerned as reducing their spheres of self-determination and self-esteem. However, extrinsic motivational factors can also reinforce intrinsic motivation if they

are seen as supporting self-determination or self-esteem. It is necessary for policy makers to consider both the internal desires/preferences that incite action (motivation) and the capacity to undertake such action (agency). However, there is also a need to make a distinction between motivation and behaviour (set of actions or activities undertaken by the individual). Behaviour is interplay between motivation and outside constraints (including availability of time, financial resources and their intrinsic skills and abilities), so whilst people may be motivated to do something, their behaviour may not reflect this, due to the outside constraints (Rogers, 1997).

According to Smith (1976), the market is a method by which self-interest can be harnessed to serve the common good. Agents operating in a competitive environment will find it in their own interest to provide goods and services of high quality and low prices, for if they do not they will loose business, income and eventually their livelihoods. Workers do work harder and produce more output when they have a financial incentive to do so, they also tend to manipulate the quality and timing of what they do as to maximize their financial rewards, often in ways that the organization neither intended nor wanted. In cases where individuals value payment, is plausible to suppose that this is because they feel reinforced in their actions because the provision of payment the outside world is recognising and appreciating the sacrifices they are voluntarily making. In cases where individuals appear to regard payment as devaluing their altruistic motivation, they may view the payments as controlling and reducing their sphere of self-determination and self-esteem, and thereby and hence be demotivating. The individual is no longer making a sacrifice and thereby lost a measure of autonomy in what he/she is doing. The analysis suggests that market payments can be employed with good effect but need to be employed with care.

A study by Brewer, Selden and Facer, (2000) found that private health-care providers who were paid by a fee-fee service provided more services than those paid by salary or capitation (according to the number of patients on their list). This indicates that a fee for fee service can lead to supplier induced demand as professionals have more incentive to encourage patients to have more medical care than they need. Patients in turn due to their relative ignorance concerning their actual need, may find it difficult to resist the medical care that is provided. Other studies have shown that financial incentives had an impact on the use of health-care resources, including admission rates, and length of stay in hospital, on compliance with clinical practice guidelines, and on achieving general immunization targets. However there is also overwhelming evidence from a large number of studies showing that financial incentives do

impact on physicians' behaviour in the intended manner (Brewer, Selden and Facer, 2000).

It has been found that in situations where workers are treated as passive victims of circumstance this may lead to demotivated workers and disgruntled beneficiaries and may have adverse outcomes for the policies concerned (Le Grand, 2003). In instances of giving too much power may result in individuals damaging their own and others welfare. It is thus essential to develop systems of monitoring and evaluation to ensure that all providers do behave in a way that policy-makers want them to. This again has consequences for motivation (Le Grand, 2003). Power (1999), argued that in cases where they regularly audited professionals, these individuals felt that they were no longer trusted and became less committed to the service and more inclined to pursue their own self-interest. There is the notion that if people feel that they are not trusted to provide a quality service and are forced to take undertake elaborate activities to prove that they are in fact doing a good job (such as fill in forms, writing reports, etc), they often become demoralized or demotivated or else motivated to behave in a more self-protective manner.

If the public sector (principals/purchaser) is to make use of the private sector as agents in delivering health services on the ground, there are potential problem areas. These include (Le Grand, 2003: 62-64):

1)Moral hazard problem: the agents are contributing to the production of an outcome that the principal values. The principal wishes to encourage the agents to produce the outcome and is prepared to pay them to do so. But the principal does not know how much effort the agents have to put in the outcome and how much is due the factors outside the agent's control. Hence the principal does not know how much to reward the agents for improvements in the outcome. The principal wants to make sure that the agent remain in the business of provision, they do not want to set up payments structures that result in people leaving to do other work that pays better or gives more security. It is possible to give the agent a fixed amount and then a bonus per unit of outcome achieved. The fixed amount is to ensure that whatever happens to outcomes the agent still receives an income; in effect it partly shifts the risk of poor outcome due to factors outside of the agents control to the principal.

2)Costly verification problem: principal can only verify whether or not an outcome has been achieved only through some expensive auditing or inspection procedure (Le Grand, 2003).

According to Dixit (2001), one of the ways of addressing these problem areas, particularly the

asymmetry of information, is through the use of incentive contracting. This includes the use of contracts that incorporate incentives for providers to reveal information concerning cost, quality and effort.

2.7. Argument for the public funding of PPM given the externalities of TB.

Tuberculosis affects the most productive age group and the resultant economic cost for society is high. The externalities of TB includes the loss of working hours due to active disease, the medical expenditure (including money spent on investigation and drugs) and non medical expenditure including travel, lodging, special food and expenditure incurred for persons accompanying the patient. Indirect costs such as loss of wages due to illness, decreased earning ability due to illness, or long term disability that necessitated change in type of work. There are also differences in the economic impact due to gender. Women often face obstacles in gaining access to diagnostic facilities, investigations and in completing adequate treatment. In addition, the triple burden of housework, childcare and employment allows them very little time to access health care and tuberculosis care for themselves. Thus TB has a considerable impact on patients' households in terms of income, health, education and nutrition, particularly if the patient was a wage earner. The socio-economic and personal sufferings of TB patients and the resultant huge costs in personal and health budgets, necessitates that public sector funds should be allocated to initiatives such as PPM that aim to address major public health issues such as TB and thus reduce the associated economic burden (Rajeswari et al, 1999).

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the descriptions of the study design, methods used in data collection and how the actual data process was conducted during this study. Issues of sample selection and sample size will also be included in sections of this chapter**.** Ethical considerations that were taken into account is also outlined which includes issues of confidentiality, anonymity and informed consent.

3.2 Study Design

The study design which is most appropriate in terms of meeting the objectives is the descriptive study, which aims to describe the perceptions of private providers in terms of the enablers and barriers to private sector participation in TB control in Cape Town. Descriptive studies are set out to quantify a problem, and its main use is to give service providers and planners information that will help them design services and allocate resources efficiently. Often such studies generate questions for further studies (Katzenellenbogen et al, 2004). The data collection tool included a semi-structured questionnaire.

3.3 Study population and eligibility criteria

Within this study private practitioners are defined as medically trained doctors (including chest specialists) who perform some private fee-for-service practice outside the public health service, non allopathic medical practitioners, private pharmacists, microbiologists and medical laboratory technologists.

The choice of study area was based on inclusion of the districts as described in Table 2. Within the South Peninsula district the suburbs chosen to be in the study area included Tokai, Wynberg, Claremont and Grassy Park and in the Central district this included Observatory, Sea Point and Pinelands. The choice of these suburbs, though not random is a result of the

researcher's prior knowledge and familiarity with these areas. This according to Deaton (1997), enhances the accuracy of the data to be obtained, at least to a certain degree, the econometric estimates obtained thereof and this strengthens the efficiency of the statistical inferences to be drawn about the study population. Other consideration factors included budget constraints and cost covering a larger expanse of area. Also private providers were specifically chosen from those areas in Cape Town in which the TB rates are the highest, to increase the likelihood that the respondents would have exposure to clients with TB. They were also selected according to their availability and willingness to participate in the study.

Table 2. Description the percentage of TB in the various districts (Department of Health, 2002)

District	**Percentage of Total TB cases in Cape Town**
Khayalitsha	20%
Nyanga	16%
Central	8%
Athlone	5%
Mitchells Plain	6%
Blaauberg	5%
Tygerberg West	5%
Tygbergerg East	7%
South Peninsula	7%

3.4 The sampling techniques and sample size

The study employed the convenience sampling method. Convenience sampling (sometimes known as grab or opportunity sampling) is a type of non probability sampling which involves the sample being drawn from that part of the population which is close to hand. That is, a sample population selected because it is readily available and convenient.
(en.wikipedia.org/wiki/Sampling_(statistics)
A total of 50 interviews were conducted.
The participants were obtained from a list of private providers which were obtained from:

- The Health Professions Council of South Africa
- The Medical Association of South Africa

- The Confederation of Complementary Health Associations of South Africa (COCHASA)
- Pharmaceutical Society of South Africa (PSSA)
- The South African Pharmacy Council
- Microscopy Society of South Africa (MSSA)
- Society of Medical Laboratory Technologists of South Africa (SMLTSA)

3.5. Questionnaire

A structured questionnaire was developed to assess the perspectives of private providers on the enablers and barriers to the effective use of PPM in TB control in Cape Town.

The study questionnaire was divided into three sections. The first included the demographic information of the participants. Geographical area, private practitioner qualifications and place of work were assessed as demographic markers. The second section included private providers' perceptions of the enablers and barriers in the public and private sectors to effective PPM in TB control. Enablers included questions around direct (i.e. financial remuneration, the free supply of drugs and the provision of training and continued medical education about of TB programmes) and indirect incentives (i.e. improved reputation in the community and increased attendance by patients and the provision of subsidized quality-assured microscopy and radiological services). Barriers included questions around those currently existing within the public sector and those in the private sector (see Appendix 2). The third section included private providers' perspectives on conditions necessary for the promotion of public-private collaboration in TB care provision. These components included policy and guideline development, advocacy and information campaigns, training and research and service delivery.

The interview schedule was so structured to start with easy and less-threatening questions linked to the study, then in the middle questions which enhanced the confidence of the respondent were asked, which provided the context for the questions which followed immediately (Katzenellenbogen et al, 2004). Most of the questions on the questionnaire were close ended, with a few open ended questions to avoid limiting responses and inhibiting respondents (Bowling, 2000). To ensure that all possibilities were covered, the "other "category had been included. Proposed answers were obtained from previous qualitative research carried out to develop public–private mix approaches for the control of TB.

Validity Measurement

The questionnaire was designed based on the WHO's guidance on implementing public-private mix approaches (WHO, 2006). It specifically focused on the components that WHO has identified as the crucial elements in fostering an effective partnership between the public and private sector. They are as follows:

1) policy and guideline development
2) advocacy and information campaign
3) training and research
4) service delivery

To minimize invalidity due to miscomprehension of study questions, each language version of the study questionnaire was piloted to individuals from the various language backgrounds to ensure comprehension of test questions. Where respondents were not clear about questions, such questions were revised and modified.

3.6. Data collection process

Self-administered questionnaires were used. The interviewer first made telephonic contact to seek permission to conduct the research and schedule appointments. On the day of the interview every respondent was given a consent form to sign. Only after signing the consent forms a questionnaire was given to each respondent. The questionnaire was translated from English to Afrikaans. However the interviews were all conducted in English as all respondents were fluent in English. The interviewer stood by to assist with problems as they arose.

At the end of the interview the principal researcher reviewed the questionnaire to countercheck for possible errors made by respondents. The information collected was de-identified to ensure anonymity.

3.7. Data management and analysis

Data were entered and analyzed using Microsoft Excel. The process of entry also involved screening and identifying errors where possible.

3. 8. Ethical considerations

Approval for this study was sought from the University of Cape Town Research Ethics Committee. The study posed no risk, pain or discomfort to any of the participants. Written informed consent was obtained from all respondents (see Appendix 1). The researcher explained the purpose of the study. The respondents were free to ask for clarification with regards to questions posed which they were not clear about. Respondents were told that their confidentiality and anonymity would be emphasized. Respondents were free to participate in the study and at any time withdraw from this study without giving a reason.

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CHAPTER FOUR

RESULTS

4.1 Introduction

This chapter provides the study findings, which firstly includes private providers' perceptions of the responsibility and level of private sector involvement in addressing the major public health issue of TB. It further includes findings of private providers perceptions on the enablers and barriers (within both the public and private sectors) to effective PPM in TB control within Cape Town. Lastly it includes results on private providers' opinions on the conditions that are essential in each component of PPM, to promote the effective use of PPM in TB control. These components of PPM include policy and guideline development, advocacy and information campaign, training and research and service delivery.

4.2 Main stakeholders in the private sector

A description of the private providers is summarized in Figure 2 and Table 3. Fifty private practitioners participated in the study, twelve of whom were female. Most of the participants fell in the age category >50 years. All respondents were in some form of for-profit, fee-for service private practice. The range of private practitioners interviewed included general practitioners (*n*=17), chest specialists who treated TB patients within their private practices (*n*=4), private pharmacists (*n=17)*, non allopathic practitioners (n=4), laboratory technicians (*n=4*) and microbiologists (n=4). The majority of interviewees worked within a private setting (*n* =49) and only one participant worked in a public-private setting. All study participants had urban practices. The mean number of TB patients seen per month was five.

Figure 2: Geographical Situation of Private Providers

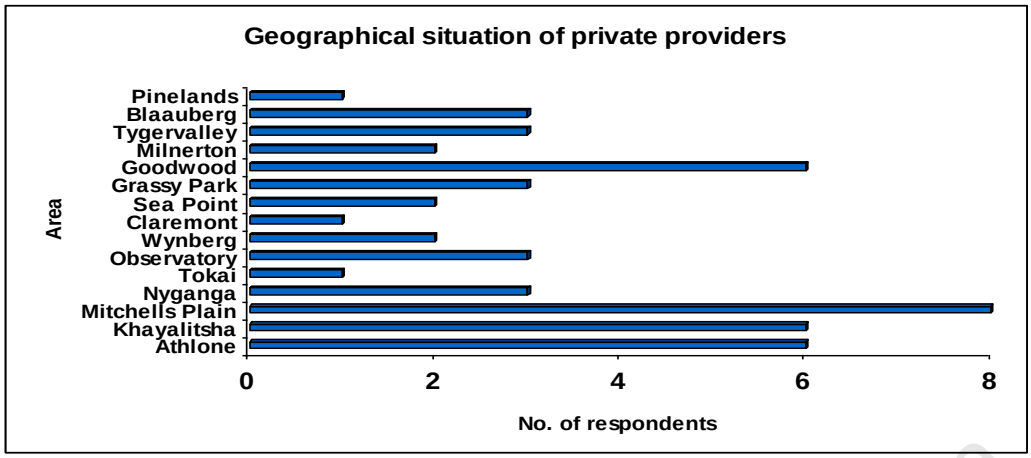


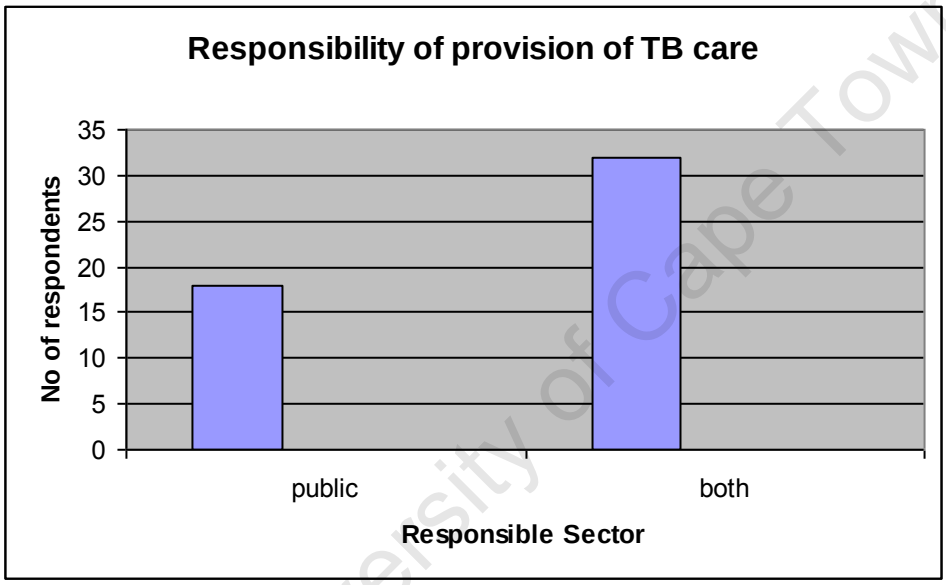
Table 3. Characteristics of Private Providers interviewed (n 50)

Characteristic	Number (%)
Sex	
Male	38 (76%)
Female	12 (24%)
Age	
25-30	3 (6%)
31-40	10 (20%)
41-50	18 (36%)
>50	19 (38%)
Setting	50 (100%)
Urban	0
Rural	
Specialty/Profession	17 (34%)
GP/Family medicine	4 (8%)
Chest Physician	4 (8%)
Non Allopathic Medical Practitioner	17 (34%)
Private Pharmacists	4 (8%)
Microbiologists	4 (8%)
Laboratory technicians	
Work Setting	
Private Practice	21 (42%)
Small Private Hospital (>80 bed capacity)	1 (2%)
Big Private Hospital (80/more beds)	3 (6%)
Pharmacy	17 (34%)
Diagnostic Facility	8 (16%)

4.2.1 Responsibility and level of private sector involvement in PPM in TB control

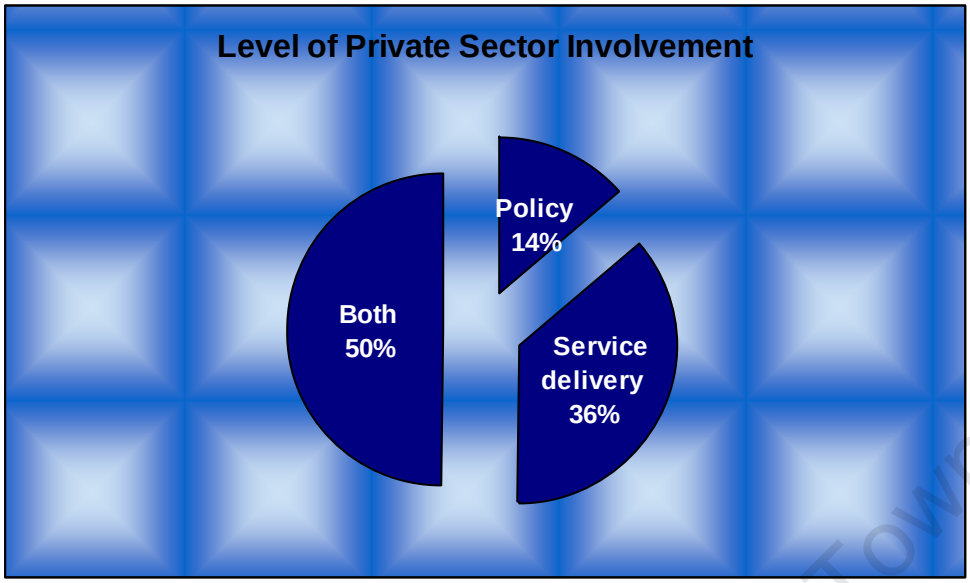
In Figure 3, thirty-six percent of the respondents felt that the responsibility for the provision of TB care provision lies within the public sector. One general practitioner felt that a possible reason could be that, “TB was a socio-economic issue, which is a burden because of the lack of political will.” The remaining 64% of the respondents felt that this responsibility lied within both sectors. A general practitioner attributed this to the fact that, “TB was a public health issue which required a comprehensive approach, involving all the major stakeholders. “

Figure 3. Provision of TB care



As shown in Figure 4, half of the respondents (50%) felt that the private sector should be involved at both policy and service delivery levels and only 14% of respondents felt that the private sector should only be involved at a policy level.

Figure 4. Private sector involvement



4.3 The enablers and barriers to the effective use of PPM in TB control in Cape Town

4.3.1. The enablers

Direct Incentives

Table 4 indicates that financial incentives (including remuneration in the forms of either fee-for service, per capita or a salary) are viewed as the main enabler to persuading private providers to collaborate in PPM initiatives to combat TB in Cape Town. This was followed by the provision training/continued education with regards to PPM and the DOTS programme and the free supply of drugs.

Table 4. Direct Incentives for involvement in PPM in TB control

Direct Incentives	Financial (only)	Continued Education or Training (only)	Free supply of drugs (only)	Combination of financial + continued education or training	Combination of financial + a free supply of drugs	Combination of continued education or training + free supply of drugs	Combination of financial, training + free supply of drugs
No. of respondents	15 (30%)	7 (14%)	4 (8%)	8 (16%)	4 (8%)	8 (16%)	4 (8%)

Table 5 shows that with regards to financial incentives fee-for service was the commonest form of remuneration requested (56%) followed by per capita payment (22%). Fourteen percent of the participants stated that they were willing to work for either fee-for service or per capita payment. None of the respondents were willing to work for a salary. Only 8% of the participants were willing to be involved in a PPM initiative without expecting any remuneration.

Table 5. Types of financial remuneration requested

Type of Financial Remuneration	Fee-service (only)	Per Capita (only)	Either fee-service or per capita	No remuneration
No. of Respondents	28 (56%)	11(22%)	7(14%)	4 (8%)

Indirect Incentives

The main indirect incentives (enablers) to persuading private providers to collaborate in PPM initiatives to combat TB in Cape Town included incentives such as their improved reputation in the community and thereby increased attendance and subsidized quality assured microscopy and radiological services. These findings are summarized in Table 6.

Table 6. Choice of indirect incentives

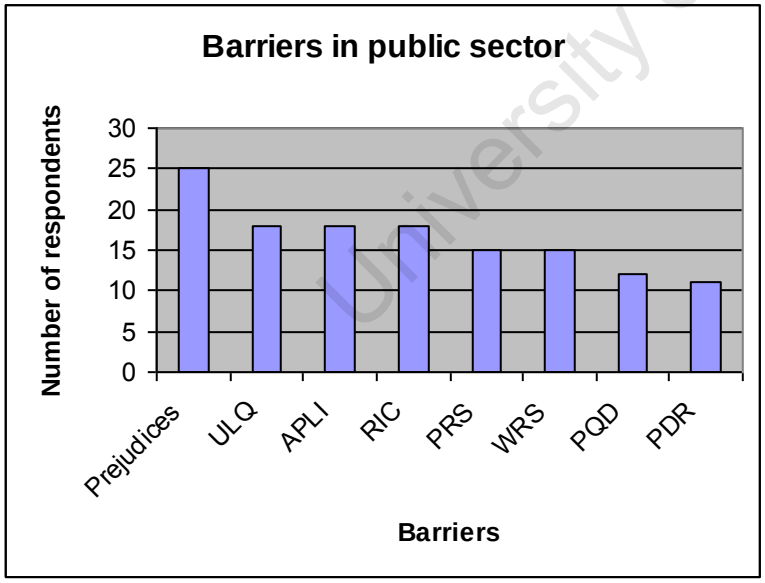
Indirect Incentive	Improved reputation and increased attendance (only)	Subsidized quality assured microscopy and radiological services (only)	Both (improved reputation and increased reputation + Subsidized quality assured microscopy and radiological services
No. of respondents	22 (44%)	14 (28%)	14 (28%)

4.3.2 The barriers to the effective use of PPM in TB control in Cape Town

Barriers in the public sector

As shown in Figure 5, the main barrier within the public sector, that private providers felt limited their collaboration with the public sector to combat TB were prejudices that the public sector had about the profit motive behaviour of the private providers (*n*=25). The next biggest barrier was the fact that the public sector was underfunded and offered low quality services (*n=18*). This was followed by the absence of precedents and the lack of sufficient information about TB programmes (*n=18*), and the great reluctance within the public sector to initiate collaboration with the private sector (*n=18).* Poor referral and information systems (*n=15*) and weak or absent regulatory systems (*n*=15) were the next reported barriers. The provision of a poor quality of drugs was seen as a limiting factor (*n=12).* Poor defaulter and retrieval systems were also mentioned (*n*=11). None of the respondents made reference to the poor quality of smear microscopy as mentioned in other studies.

Figure 5. Barriers in the public sector



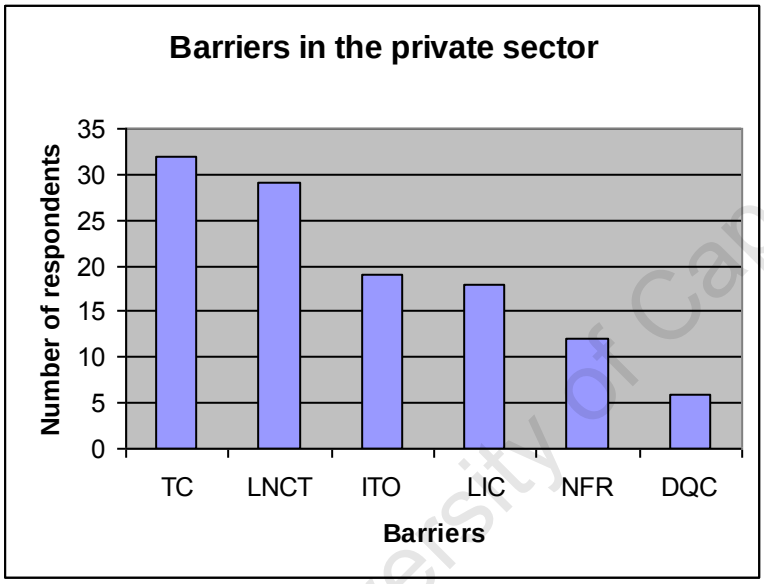
Prejudices: Prejudices about the profit motive and behaviour of private providers
ULQ: Underfunded and low quality services
APLI: Absence of precedents and the lack of information
RIC: Reluctance to initiate collaboration
PRS: Poor referral systems
WRS: Weak regulatory system
PQD: Poor quality drugs
PDR: Poor defaulter retrieval

Barriers in the private sector

As presented in Figure 6, the main barrier within the private sector that private providers felt limited their collaboration with the public sector to combat TB was time constraints to participate

in sensitization and training programmes (*n*=32). This was followed by genuine limitations to undertake non clinical tasks such as defaulter retrieval, social support and detailed record keeping and analysis (*n*=29). Inadequate training and orientation (*n*=19) and the fact that private providers found that liaison and interaction with the public sector was challenging (*n*=18) were also mentioned as limiting factors. The fact that there was no remuneration for engaging in such initiatives as PPM in TB control, deterred some private providers from collaborating with the public sector (*n*=12). Doubts about the quality of care within NTP were cited as another barrier (*n=6*).

Figure 6. Barriers in the private sector



TC: Time constraints to participate in sensitization and training programme
LNCT: Genuine limitations to undertake non clinical tasks
ITO: Inadequate training and orientation
LIC: Liaison and interaction challenging
NFR: No Financial Remuneration
DQC: Doubts about the quality of care within NTP

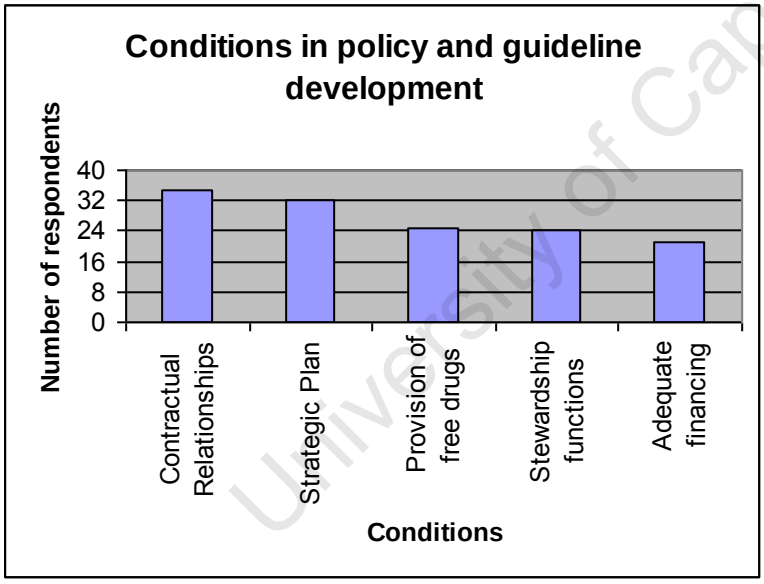
4.4 Essential components for effective PPM in TB control in Cape Town

Conditions in policy and guideline development

As demonstrated in Figure 7, the majority of respondents (n=35) felt that the most essential factor in allowing for adequate policy and guideline development was appropriate contractual

relationships and financial arrangements with private providers who opt to be active participants in PPM in TB care provision. The next mentioned condition (*n*=32), was the need for a strategic plan that included PPM as a major strategy. This strategic plan includes clear guidelines on how to involve different provider types with clear treatment regimes which comply with national and international guidelines, including uniform recording and reporting systems. This was followed by the need for the provision of free drugs (*n=25*). Another condition was the development of clear stewardship functions for PPM projects (*n*=24*)*. Stewardship functions included the clear division of tasks and assignment of responsibilities with a particular attention on supervision. Adequate financing for TB services through a multi-year budget which included government financing of drug costs and human resource costs and the costs of monitoring and evaluation activities was referred to as condition needed for adequate policy and guideline development (*n*=21).

Figure 7. Conditions in policy and guideline development



Conditions in advocacy and information campaign

Forty-two percent of private providers felt that initiatives such as World TB Day and annual international campaigns were essential to promoting effective PPM in TB control. Twenty percent of respondents expressed the need for availability of advocacy products (i.e. national level success stories of PPM DOTS, information on "What is PPM DOTS?" information on DOTS as well as country specific documents and initiatives such as "TB in the workplace").

Thirty percent of respondents felt that both conditions were essential. Eight percent of respondents declined to answer this question.

Conditions in training and research

The majority of respondents (34%) felt that orientation/training courses on TB and DOTS were essential for private providers. The introduction of DOTS in undergraduate and postgraduate medical education was cited as another condition (16%). Fifty percent of respondents felt that both conditions were essential.

Conditions in service delivery

The most important condition to ensure that service delivery facilitated effective PPM in TB control was improved referral and information systems (*n=36*) The second most important condition was access to diagnostic facilities (*n*=35). This included the possibility of contracting the services of private diagnostic facilities. Private providers felt that the implementation of TB drug management guidelines and ensuring the quality of locally produced/procured TB drugs meet international standards were important enablers of PPM in TB control *(n*=29). The provision of TB drugs (*n*=25) and the establishment of a TB diagnostic committee to validate the interpretation of radiological findings (*n*=25) were also supported as conditions ensuring adequate service delivery within PPM.

4. 5. Summary

The overall findings of this study have shown that most respondents felt that the responsibility for the provision of TB care lies within both the public and private sectors. There was also the view that the level of private sector involvement in combating TB should include both policy and service delivery levels.

Whilst all respondents were willing to collaborate with the public sector, only 8% of them were willing to do so without expecting financial remuneration. Most private providers in this study favoured financial remuneration as the main direct incentive to collaborate in PPM initiatives. The preferred form of financial remuneration was fee-for service. Training and the free supply of drugs were also viewed as incentives to engage in initiatives such as PPM in TB control.

The main indirect incentive to persuading private providers to collaborate in PPM initiatives was their improved reputation and hence increased attendance by patients. This was followed by the provision of subsidized quality assured microscopy and radiological services.

In this study private providers highlighted some of the barriers within the public sector that currently limited their collaboration in PPM in TB control. The public sectors' prejudice about the profit motive of private providers was top of the list. Furthermore the public sectors' inadequacy in terms of resource allocation and poor quality of services were stated as current barriers. Despite both sectors playing a pivotal role in the provision of health care, private providers felt that the public sector was still reluctant to initiate collaboration. The absence of precedents and the lack of information about TB programmes were further barriers in the public sector.

With regards to their own limitations, time constraints to participate in sensitization and training programmes was the main barrier limiting collaboration between the two sectors. Genuine limitations to undertake non clinical tasks such as defaulter retrieval, social support and detailed record keeping and analysis was a view that most private providers shared when it came to the limiting factors within their personal capacities. Inadequate training and orientation and the fact that liaison and interaction was challenging were also cited as barriers.

The main condition in policy and guideline development that respondents felt was essential to promote effective PPM in TB control included the use of appropriate contractual relationships. There was a call for a strategic plan on TB that includes PPM as a major strategy. The provision of free drugs was also viewed as a necessary condition. This was followed by the development of clear stewardship functions for PPM projects and the adequate financing for TB services through a multi year budget.

The main condition in advocacy and information campaign to promote effective PPM in TB control was initiatives such as World Aids day and an annual national information campaign. Secondly they reported that the availability of advocacy products was important in promoting effective PPM in TB control.

Orientation/training courses on TB and DOTS for private providers was regarded as a necessity in terms of facilitating the effective use of PPM within TB control.

In terms of service delivery, the main condition to promote effective PPM in TB control was the need for improved referral and information systems. This was closely followed by the need for the access to diagnostic facilities. The need to facilitate optimal service delivery for the implementation of TB drug management guidelines and ensuring the quality of locally produced/procured TB drugs meet international standards was viewed as a condition to promote effective and efficiency service delivery. The provision of free drugs and the establishment of a TB diagnostic committee were also mentioned

CHAPTER 5

DISCUSSION

5.1 Introduction

In chapter four the study findings of private providers' perceptions of the main enablers and barriers to improved TB control in Cape Town were presented. Private providers' perspective on the main conditions that should be part of the core package of PPM in TB control was identified. In this chapter the study findings are discussed in relation to similar studies that were conducted in other developing countries. It also includes discussions about the conditions needed to facilitate the effective use of PPM in TB. Lastly this chapter considers the main limitations of the methodology the study used.

5.2 Main stakeholders in the private sector

As discussed in chapter one, there are gross inequalities between the public and private health sectors in South Africa. In addition, given the accessibility and popularity of the private sector, the public sector cannot effectively control the TB epidemic without drawing on the private sector. This, together with the dual impact of HIV/AIDS leads the public sector to depend on the stronger private sector to meet increased demand for TB and HIV related services. In this study, all private providers were willing to collaborate with the public sector and despite the limitations in both sectors; there was a realization that a mutual effort is needed to address the issue of TB control in Cape Town. This was a view that was similarly shared in a study in Indonesia, where 82% of PPS were willing to collaborate with the public sector (Watkins et al, 2006).

The responsibility for the provision of TB care was largely seen as a combined effort by both sectors (64%). One explanation was that it was felt that TB was a public health issue that needed a comprehensive approach including the involvement of the main stakeholders in both sectors. This is supported by evidence in a study in Nepal (James et al, 2005), where they concluded that by combining the strengths of private practitioners' and the public sector, public-private partnerships can provide services that give high treatment success rates and increased notification rates. This study proved the feasibility of implementing a public-private initiative to combat TB, here they achieved a treatment success rate of greater than 90% and simultaneously increased the case notification rate.

There are however those (36%) that were of the opinion that the responsibility lied in the public sector as they felt that TB is a socio-economic issue which lacks the needed political will. This is a sentiment shared by the WHO, who stated that the lack of political commitment in governments, development agencies and donors, is a principal factor hindering TB control. WHO also felt that TB is an issue which needs to be dealt with primarily at a political level as this is a socio-economic issue (Nunn et al, 2002). In a study in Delhi (Lonnroth et al, 2004), it was found that where the government directly took first initiative, projects were most successful in terms of contributing to the three central objectives of TB control: high treatment success, high case detection and equity in access. .As with the government initiative, there was an increased commitment to the provision of funding for PPM initiatives in TB control as well as direct guidance on the conditions for PP involvement.

Fifty percent of private providers were of the view that the level of private sector involvement in combating TB should include both policy and service delivery levels. One of the explanations is that private providers felt that they should be consulted to ensure that their interests are considered in planning and implementing public-private mix. Especially considering that there are often divergences between private sector actors and public health policy makers in terms of goals, constraints and expectations. This is reinforced by Lonnroth et al (2004), who suggest that a top-down strategy may fail if time is not invested for dialogue between all stakeholders to build trust and achieve a high level of agreement on common goals for PPM. They further add that as conflicts of interest exist, they need to be identified early and discussed openly. Evidence based on the findings of a study in the Philippines, concurred that the inclusion of PPs in the forums that decide the policy on TB control increases the feasibility of a private–public partnership (Portero et al 2003). These arguments hence support the notion that private sector involvement should be at all levels including a policy and service delivery level.

5.3 The enablers and barriers to the effective use of PPM in TB control in Cape Town

5.3.1 The enablers

Direct Incentives

As mentioned in chapter two, policy makers need to consider how those who provide services are motivated. This is specifically important when considering the use of incentives. If an

individual is externally motivated and too much of an emphasis is placed on this extrinsic motivation (i.e. monetary incentives) this can crowd out motivations that are internal to an individual such as more altruistic concerns. However if the extrinsic motivators are seen as supporting to the individual's self-determination and self-esteem this can reinforce the intrinsic motivation (Rogers, 1997). It is thus necessary for policy makers to consider both the internal desires/preferences that incite action (motivation) and the capacity to undertake such action (agency).

Most private providers (62%) favoured financial remuneration as the main direct incentive to collaborate in PPM initiatives, with fee -for service being the preferred form. There are mixed views on the role of financial incentives in increasing the effectiveness of PPM. There are arguments against, which state that when workers have a financial incentive, they may manipulate the quality and timing of what they do as to maximize their financial rewards (Smith,1976). Further arguments against the economic support from the NTP to the PPs, is that financial remuneration is considered unfeasible since the governmental NTP already has an important funding gap. Medical fee charges in the private health sector used to be a serious barrier for low-income TB patients to seek medical care; as well as the high cost of anti-TB drugs in the open market. Therefore, the provision of TB health services by the private sector, obviously profit-orientated, could jeopardize the sense of equity that must guide a public health programme, especially in control of diseases strongly related to poverty. According to Watkins et al (2006), the most cost-effective system is to increase the case detection rate, to treat and to diagnose for free, and to follow-up properly the TB patients in the well-structured public health network.

According to a study by Brewer et al (2000), private public-health providers who were paid by fee-for service provided far more services than those paid by salary or capitation (according to the number of patients on their list). This indicates that a fee-for service can lead to supplier induced demand as professionals have more incentive to encourage patients to have more medical care than they need. Other studies have also shown that financial incentives had an impact on the use of health resources, including length of stay in hospital and the compliance with clinical practical guidelines. In other studies there were reports that certain types of financial remuneration do impact on the quality of care given to patients. This was the finding in a study by Bazzoli (1997) where it was reported that primary care providers believe the quality

of care they provide to their patients through capitated contracts was inferior to the care they offer patients with other forms of insurance.

As mentioned in chapter two, arguments in favour of financial remuneration include the fact that workers do work harder and produce more output when they have financial incentives (Smith 1976). There are a large number of studies showing that financial incentives do impact on physicians' behaviour in the intended manner (Rogers,1997).

In this study only 8% of private providers were willing to be involved in a PPM initiative without expecting any form of financial remuneration. Proposed explanations could include that all respondents were involved in for-profit private practices and hence consider TB services as no different from any other health services which they would charge their patients for. None of the respondents was willing to work for a salary. As discussed in chapter two, this could be linked to the fact that private providers in this instance associated a salary with a form of extrinsic control, where they would have to work under the direct commands or orders from the state. As stated under motivation theory, extrinsic motivators can drive out motivations that are internal to individuals such as more altruistic concerns. In particular, they will do so if they are viewed as controlling by the individuals concerned as reducing their spheres of self-determination and self-esteem (Rogers, 1997).

Whether or not private providers expected financial rewards for their contributions to PPM initiatives in TB control seems to differ from study to study. For example in a study in the Philippines a fair proportion of private providers (61.6%), were willing to collaborate with the NTP without financial remuneration (Portero et al, 2003). This is in contrast to a study in Ho Chi Minh City (Lonnroth et al, 2004), where the majority of private providers expected financial remuneration for their efforts. Interestingly however, in Ho Chi Minh (Vietnam), it was found that that direct financial incentives were not associated with improved diagnosis or treatment

Watkins et al (2006) stated that the provision of further training for private practitioners has been identified as a key strategy to improve the effectiveness of the private sector in TB control efforts. In this study, training was also viewed as an incentive to engage in initiatives such as PPM in TB control (54%). Explanations that could be proposed include training presented opportunities for private providers to increase their knowledge with regards to the procedural and factual information about the TB programme, as well as helped them understand their roles

in such a programme from the onset. Private providers could also value training as it provided them with the chance to interact with the programme staff and for the clarification of expectations. Post-training, allowed for opportunities to give feedback which would thus aid the revision of the training material (WHO, 2002).

The free supply of drugs was an incentive which only 40% of private providers saw as an incentive to engage in PPM initiatives such as PPM in TB control. The need to provide free drugs could be linked to their improved reputation amongst the community and thereby serve as a marketing tool to increase their patient base. This could also be due to altruistic concerns, where poor TB patients who make use of the private sector do not have the finances to purchase the anti-TB drugs. Private providers therefore feel that the provision of free drugs would thus assist in alleviating the health and socio-economic burden on households. Whereas the remaining 60% percent who did not share this opinion, could be due to the fact that drug sales (specifically for pharmacists), were seen as a source of their income and therefore they perceived free drugs as a financial threat.

In other studies such as in Indonesia (WHO,2003), 50% of participants noted the provision of free drugs as an essential component of PPM, with 92% of them not expecting to make any profit off them.

With regards to direct incentives as a whole, a study in the Philippines reported similar findings to this study, where most of the private providers (83.3%) expressed their willingness to collaborate with the NTP but for a form of financial remuneration (77.3%). Training, in the form of refreshment courses on TB control and the provision of free drugs were also identified as incentives that could persuade them to partake in PPM in TB control (Portero et al, 2003).

Indirect Incentives

The main indirect incentive to persuading private providers to collaborate in PPM initiatives was their improved reputation and hence increased attendance by patients (72%). This was followed by the provision of subsidized quality assured microscopy and radiological services.

The need for their improved reputation and hence increased attendance can be explained in terms of two economic theories. As discussed in chapter two, the first is neo-classical economic

theory, where it is thought that competition may result in providers improving on their services to yield a competitive advantage over other providers in the same market (Bennett et al, 1997). For example a private provider who offers subsidized TB services may have a competitive advantage over other private providers who do not and thus attract more business and thereby yield a greater profit. The second is institutional economics which focuses on property rights and suggests that private providers may be keen to provide services to consumers if they know that the consequence will result in higher profits (Bennett et al, 1997).

It is also plausible to suppose that where private providers value improved reputation that this is because they feel reinforced in their actions because the outside world is recognizing and appreciating the sacrifices that they are voluntarily making.

The findings were similar in a study by Lonnroth et al (2004), where some participating PPs reported that the opportunity to provide some subsidized services for low income patient groups was a business advantage, since it improved their reputation in the community and the patients and their families then become their permanent clients for all health problems. The role of subsidized quality-assured microscopy and radiological services as good incentives to attract referrals from the private sector was also a finding in a study in Indonesia (WHO, 2002).

5.3.2 The barriers to the effective use of PPM in TB control in Cape Town

Barriers in the public sector

Prejudices about the profit motive behaviour of private providers were seen as the main barrier to private sector involvement in PPM in TB control in Cape Town. However, they were discussed in a study by Uplekar (2003). In Uplekar' s study NTP managers saw private providers as exploitative and money-minded. Private providers in his study generally viewed the public sector as disrespectful and distrusting. Bennett et al (1994) also highlight some of the prejudices about private providers and this was related to their use of illegitimate or unethical means to maximize profit, less concern towards public health goals, lack of interest in sharing clinical information, creating 'brain drain' among public sector health staff, and lack of regulatory control over their practices. Rosenthal (2000) cites similar concerns towards involving the private sector in delivering public health services.

Previous research in Bali found that public practitioners perceived the activities of some private practitioners as a major impediment to TB control efforts. The main issues identified included perceptions that private practitioners had poor diagnostic procedures and provided inadequate treatment supervision and follow-up (Watkins et al, 2006).

Whilst there may be reasons for the prejudice notion about the profit-making motive of the private sector, the public sector needs to make a distinction between the motivation and behaviour of private providers. As mentioned in Chapter two, behaviour is interplay between motivation and outside constraints (including availability of time, financial resources and their intrinsic skills and abilities), so whilst private providers may be motivated to be more actively involved in public health initiatives such as PPM, their behaviour may not reflect this due to outside constraints. For example, whilst private providers may want to refer patients to the public sector, the proper referral systems are not in place to facilitate this (Rogers, 1997).

Furthermore in this study, the public sectors' inadequacy in terms of resource allocation and poor quality of services were stated as current barriers**.** There is some doubt whether the allocated financial resources is sufficient to finance the proposed package. However additional resources will not easily come from reallocations within the health budget. Apart for the need for greater financial resources, there is a need for more efficient spending and for better transparency and accountability. Currently within the South African context there are numerous issues impacting on the resources available to the public sector, which hence impacts on the quality of services. These include critical issues such as:

- the Medium term development plan (MTDP) does not run parallel to the Medium Term Expenditure Framework (MTEF). It was therefore proposed that that a mid term evaluation takes place to assess whether the MTDP needs adaptation in view of the development of the NTCP and the new MTEF. It was considered that programmes should be offered within a comprehensive primary health care package, while still ensuring that they have the necessary focused attention and skilled support.

-additionally, the implementation of the Health Sector Strategic framework is. confounded by the slow unfolding of the new municipal boundaries and structures. This causes lack of clarity of the definition of "municipal health services", delays in transfer of staff from provinces to local authorities, delayed service arrangements between provinces and local authorities and problems in assuring adequate infrastructure and the developments of effective referral and support systems.

- also quality issues such as opening hours, waiting time, clinical skills and availability *of* medicines are yet insufficiently addressed (MTDP, 2002).

-another issue to consider within the domain of public sector resources, is the inadequacy of human resources. There is insufficient well-trained staff to provide TB control of adequate quality (Nunn et al, 2002). Government thus needed to consider the numbers of staff needed, their cadre and training levels, the attrition rate, the replacement rates required and the sources of new staff. Work load is an important consideration in public-private mix collaborations. For example if there is insufficient staff recruited for this initiative, the resultant increase in the supervisory workload could compromise the existing quality of the programme (Singh et al, 2005).

In this study private providers felt that the public sector offered a low quality of services. Poor quality of services in the South African public health system is characterized by inaccessible and inefficient health services that lack human resources, has an inadequate supply of drugs and has poor monitoring and follow-up of patients leading to poor defaulter retrieval rates. In the Bali study, private providers shared a similar viewpoint. They reported that a significant proportion of their patients had first been diagnosed and treated in the public sector, but were dissatisfied with the care they had received (Watkins, 2006).

The absence of precedents and the lack of sufficient information about TB programmes were identified as barriers within the public sector to effective PPM TB control. Private providers in this study did not elaborate on the reasons for and the impact of the absence of precedents and the lack of sufficient information. However Watkins et al (2006) mention that the respondents in his study felt that the lack of information about DOTS contributed to the poor quality of TB treatment and control services from public clinics and hospitals and served as a barrier to the effective use of health services to combat TB. Respondents believed that DOTS was not well done because staff in the public sector lacked the information to understand the steps that should be followed, to understand about compliance, resulting in low cure rates.

In a study in the Philippines, private providers also stated that the development of an information system is essential to motivate the private sector to report TB cases and treatment outcomes (Mantala, 2003).

Private providers believe that within the public sector there is a reluctance to initiate collaboration. Whilst the reasons for the public sectors' reluctance to initiate collaboration were not explicitly discussed in this study, Uplekar (2003) highlights some of the reasons that were

mentioned by participants in his study. This was linked to previously mentioned prejudices and the fact that the public sector sees private providers as largely unorganized, in the absence of operative regulatory systems and thus generally unmanageable.

Yet, collaboration between the two sectors is essential. This is demonstrated in the Bali study, where it was found that increased collaboration between public providers in the areas of treatment monitoring and follow-up appears essential, given the limited capacity for monitoring and follow-up in the private sector and the recognition of this capacity within the public sector services as an area of relative strength (Watkins et al, 2006). One key success to PPM development in New Delhi, was involving major stakeholders in the private sector while acknowledging potential conflicts between the public and private sectors and investing time in resolving them through active dialogue (Lonnroth et al, 2004). In this study, private providers had the view that an adequate regulatory system was necessary in persuading them to collaborate in PPM initiatives. Private providers felt that the provision of a strengthened regulatory framework has the potential to address the communication and knowledge deficit that currently exists for some private practitioners (Watkins et al, 2006).

To get private providers do what is needed, they could either be provided with incentives or regulated. Some studies have investigated how the process of regulation could be structured and implemented. In the New Delhi study, they placed immense importance on the role of strong professional bodies, having operational responsibility and interacting with individual providers and thus facilitating public-private interaction. However it must be noted that other studies have found that where the states hands the authority to monitor and enforce standards of care in the public and private sector to a professional organization, they are rarely particularly successful regulators and tend to be lenient on the professionals at the expense of the public (Bennett et al, 1997). This could be attributed to the fact that the professional organization is often run by members of the profession, whose objectives may be closely aligned with the providers with whom they are supposed to be regulating. This makes it difficult for them to play a sufficiently independent monitoring role. Instead, the possibility of using NGO's should be considered as a neutral ground which may be a less biased way of facilitating dialogue and collaboration , especially when there is initial distrust between the public and private sectors (Lonnroth et al, 2004).

Some private providers are concerned that the government is not able to ensure a regular supply of drugs of a high quality. This is problematic as it could contribute to further increasing the defaulting rate and hence increase the burden of MDR-TB.

This was also a concern of private practitioners in Bali, who identified the need for improvements in the quality of drugs provided (Watkins et al, 2006). The mechanisms for ensuring drug quality compromise a further priority area, especially in respect of the fixed dose combinations that are increasingly recommended. Much remains to be done to assess more effective ways of delivering treatment, e.g., blister packaging with fixed dosed combinations and innovative ways of supporting patients to adhere to treatment (Nunn et al, 2002). Quality assurance is essential to providing high quality care at all levels. It includes activities such as the assurance of the quality of drugs provided. Quality assurance procedures for each activity are specified and written and the quality assurance procedures should include the routine monitoring of certain indicators. Private providers in a study in Indonesia identified that within the public sector drug management was weak as there were frequent stock outs in various provinces (WHO, 2002).

In this study some private providers saw poor referral and information systems and poor defaulter retrieval, as barriers within the public sector. Defaulter retrieval was one of the constraints which private providers also identified in a study in Indonesia (WHO,2002). In the Indonesian example it was found that in the public sector retrieval actions were at best undertaken two weeks after the patient defaulted. Lessons on ways of addressing poor referral systems and defaulter retrieval could be taken from the study by Singh et al (2005), where TB clinic staff asked each TB suspect (i.e. a patient with a cough of three weeks or more duration) for a referral slip from the private practitioner and noted the name of the referring provider in the TB laboratory register. TB patients were categorized and placed on treatment by the hospital medical officer. Patients were offered a choice of treatment observation either at the hospital or with the private practitioner, and were then introduced to the respective treatment observer. The initial visit to the patients' house for address confirmation and for health education was done by the TB health visitor or supervisors. The private practitioners maintained the treatment cards, drug boxes and gave standardized NTP thrice weekly regimens, with all doses observed in the sensitive phase and at least the first dose observed in the continuation phase. The private practitioners tried to follow-up the patients who missed their scheduled doses. However the programme staff considered themselves directly responsible for the treatment outcome of all

patients and was proactive in identifying patients who missed 1-2 doses and in returning them to treatment. The TB health visitor visited each private practitioner twice weekly to ensure timely follow-up sputum examinations, checked drug boxes and treatment cards, and identified patients late for treatment. Patients were then visited at their homes to convince them to return to treatment (Singh et al, 2005).

Interestingly in this study, no respondents mentioned the quality of smear microscopy as a barrier to effective PPM in TB control. However in the Bali study, respondents generally reported that, the poor quality of the available microbiological diagnostic services was seen as a major barrier to accurate diagnosis and accessing free treatment (Watkins et al 2006). This was also the case in a study in Philippines, where they found that the weakest point of this policy was the diagnosis based on sputum microscopy examination (52.9%) (Portero et al,2003). This was also the case in Indonesia where it was felt that the quality of smear microscopy at public hospitals were poor and this was confirmed by quality assurance efforts by the NTP and the laboratory supervision reports, which showed that the error rates were exceptionally high (WHO,2002).

Barriers in the private sector

Whilst many private practitioners stated that they required further training and information, time constraints was cited as a potential barrier to this taking place. Time is of the essence in an environment where income is related to the number of patients that are seen and billed in a day. As training is not a billable aspect of service delivery, it does interfere with the potential income that a for-profit practice may generate. This was an issue that was similarly encountered in the Nepal study where it was found that workshops to disseminate information with regards to the NTP's concerns about treatment practices then current among practitioners and internationally recommended guidelines for case management of TB and services available to private practitioners under public-private partnership, was largely unsuccessful and expensive (and hence not replicable). Time constraints for training, was reported as the major reason. To address this problem, they stopped the workshops and visited the private practitioners at their clinics, where they explained the public-private project and distributed a specially developed clinical manual and map that showed the location of the treatment centres and the guidelines for referrals to them. This strategy agreed by the public-private partnership was to encourage private practitioners to use referral facilities for TB laboratory tests, DOT and complicated cases

rather than to provide all of the components of DOT themselves. Every 6-8 months, all private practitioners were reminded about the public-private partnership, either by visit to their clinics or through educational materials that were sent to them (James et al, 2005).

In this study, limitations to undertake non clinical tasks such as defaulter retrieval, social support and detailed record keeping and analysis were reported as a barrier in the private sector. Similar findings were reported in the Bali study, where the lack of capacity for private practitioners to successfully monitor patient treatment was considered a major limitation of the services offered. This lack of capacity for patient follow-up was associated with a general lack of resources, poor monitoring systems and a lack of time to dedicate to education and follow-up: "If the patient doesn't show up it means I have lost the patient. It is not easy to follow them up . . . because in private [practice] we don't have a field worker. You don't have time to call the patient or find the patient. This is the big problem . . . if they don't come we just leave it. We have so many things to do "(Watkins et al, 2006).

Private providers felt that they were inadequately trained. This can have detrimental effects as private providers' lack of training in public health can hinder their understanding of the implications of TB for community health (Portero et al, 2003). Possible explanations could include that private providers could have poor knowledge about what the public system offered and how it might be utilized within their practice. It could also be attributed to private providers having difficulties with accessing continuing medical education and the lack of orientation and training that could impact on their abilities to be effective contributors to the PPM initiative to combat TB.

Given the distrust between PP's and NTPs, it did not come as a surprise that in this study private providers felt that liaison and interaction is difficult. This was also the case in Bali, where it was found that poor communication is common between public and private providers in many developing countries. This poor communication and differences in perception between public and private providers can significantly hinder efforts for TB control. Whilst the role of the public NTP was generally understood, the role of the private sector in TB control was unclear, except as a provider of health care for TB patients who had the ability to pay for private treatment. Clearly defined roles for each sector and effective communication and referral systems are important elements for successful liaison and interaction (Watkins et al, 2006).

Doubts about quality of care within NTP existed amongst private providers in this study. This was also a factor in the Bali study, where private providers stated that the limitations in the public sector brought about the poor quality of care within the NTP (Watkins et al, 2006). In this study in Bali, respondents point out their doubts about the quality of care within NTP, respondents expressed concerns over the quality of the generic medications provided by the public clinics as they are 'very cheap and . . . the concentration is not the same'. These were perceived as being of a lower quality than branded medicines that are not available free of charge. Respondents also reported that patients did not trust the effectiveness of generic medications dispensed from the public sector, "all people do not want to take the generic, because the tablet looks cheap, only small tablet, very limited, not so many kinds of medicine at the public health centres, just the standard. So some patients will say whatever their illness, the treatment is the same . . .That is one reason why they don't believe . . . their health will be improved or cured from the public health centres" (Watkins et al, 2006).

In general the barriers identified in this study concur with the overall findings of private practitioners' perceptions of barriers to the treatment of patients with TB in another developing country (i.e. Bali). In the Bali study, the main barriers to improved TB control identified by private practitioners reflect difficulties encountered within the following areas: limitations of public services, public-private integration and limitations of private services. Private practitioners identified the need for improvements in the level of community education regarding TB, the degree of public-private interaction, the quality of public services and practitioner access to training (Watkins et al, 2006).

5.4 Essential components for effective PPM in TB control in Cape Town

Conditions in policy and guideline development

Contractual relationships were reported as a condition needed within the PPM component of policy and guideline development. This could include government paying the standard consultation fee when the patient visited the private medical practitioners, and also cover the cost of training, drugs for DOTS, laboratory supplies and materials for recording and reporting. There is some evidence that contracting mechanisms do not work very well within resource poor environments, especially where monitoring arrangements are weak (Mills et al, 2002). It is also important to note that an urban based private sector contract for a subset of primary services

was found to operate differently from rural-based public sector contracts which attempted to provide broader coverage. Things bring attention to the fact that more attention needs to be given to social, environmental (the market, scope of services, management capacity and the involvement of the public purchaser) and institutional factors that influence upon the contractual relationships. Poorly developed institutional capacity, a shortage of administrative and contract writing skills and poorly developed markets may contribute to why contracts function in a different way than that envisaged by policy makers and advisors. There are difficulties in pursing policies of contracting with providers for public health services these include deciding on how to divide up responsibility between public and private sectors whilst wanting to maintain a comprehensive service delivery system. It is difficult for contracts to foresee and make provision for all eventualities and difficult to completely specify the division of risk, responsibility and incentives between the two parties, especially for primary health care which involves a broad and complex set of services (Goudge,1997).

In this study, the provision of free drugs was regarded as a condition needed for the effective implementation of PPM. This was found in practice, when in New Delhi it was found that the distribution of drugs from the NTP to PPs for dispensing free of charge to patients positively influenced both the completion of treatment and poor peoples access to treatment (Lonnroth,2004). Hence providing drugs free of charge to patients may improve treatment outcomes and equity. The public sector could also use this as a tool for managing the private sector if they were to implement mechanisms such as formal or informal drugs-for-performance contracts.

With regards to clear stewardship, private providers in Indonesia shared the sentiments with participants in this study as they too felt that a clear division of tasks and assigning responsibilities was required with particular attention to close and frequent supervision (WHO, 2003). The Nepal study also highlighted the importance of clear stewardship functions (James et al, 2005).

Government stewardship plays an essential role as it is an opportunity for adequate monitoring and quality control of private providers and aligns their practices to public health programmes. The public sector must take long-term overall responsibility for public health and needs to show commitment to ensuring the standards of care are maintained and to react quickly when problems arise. Where the public sector is weak, a public-private partnership may encourage

the private sector to expand the provision of TB services that have low patient retention rates thus, threatening public health and potentially weakening the public sector further. The effects of poor public-private partnership may prove to be irreversible, for example, developing countries do not have the resources to tackle the widespread multi-drug resistant TB that could develop as a result of poor control of standards of care. Within a public-private collaboration, it is essential to ensure that responsibilities are assigned. Providers need to be assigned different roles in referral, diagnosis, treatment initiation, directly observed treatment, DOTS provision, training and supervision.

Conditions in advocacy and information campaign

Private providers valued the need for advocacy and information campaigns as essential components of PPM initiatives (42%). Advocacy aims to win the support of key constituencies in order to influence policies and funding for tuberculosis control. It should be a key issue at all levels in the decentralized health system of South Africa to obtain continuous support.

Twenty percent of respondents felt that there is a need for information, education and communication activities to be intensified. As when this is intensified and effective, it contributes to tuberculosis control by improving health-seeking and adherence behaviour. The outcome of such initiatives should be to improve the knowledge of the population about tuberculosis, promote behaviours and life styles beneficial to TB prevention and control and strengthen the involvement of patients and the entire society in TB control. All information, education and communication activities require a dedicated budget based on actual need (DoH, 2002).

Similar findings were reported in the Bali study, where provider providers felt that the lack of systematic health promotion efforts aimed at increasing community awareness of TB was widely identified as a major problem: With regards to education, first let people know about TB properly, how to control TB by themselves and understand how it influences others, signs and symptoms, and let them feel free to tell what the problem [is] in themselves or their family to the doctor . . . many people lack information about TB . . . they do not know they have the symptoms of TB (Watkins, 2006).

Conditions in training and research

Orientation and Training was identified as a component essential to the facilitation of effective PPM in TB control (84%). Pre- and in-service training of staff in tuberculosis control is an essential part of the NTCP responsibility. WHO (2002), recognizes the need for research in promoting effective TB control initiatives such as PPM. The South African government recognizes the need for research, specifically operational research. This is defined as the systematic collection of information linked to the improvement in service provision. The process is delineated as an iterative process of describing the situation; analyzing the problem; evaluating the effects of the change; recommendations and planning an intervention/change.
However the government currently has a couple of critical issues that need to be dealt with before operational research can be implemented effectively and efficiently and these include:
I. Most health care providers are not interested in, perceiving research as an expensive luxury, complicated and more aimed at personal advancement than at improving the delivery of care and distorting routine performance:
2. Many researchers do not acknowledge local knowledge and expertise of health care providers in the field, operate In a rather isolated way and do not provide adequate feedback of research results to the community and the health care providers;
3. Staff of the NTCP may not be trained to reflect critically upon the daily routine and the quality of the recording and reporting system may be so poor that it does not reveal problems:
4. Research is not properly co-ordinated leading to wrong priorities, duplication. inadequate feedback of results to relevant authorities; and
5. Funds are part of health system research and managed by the Health Systems Research Unit at DOH and not by the NTCP (DoH, 2002).

Conditions in Service delivery

There is a need for better referral and information systems if the PPM is to facilitate effective intersectoral collaboration in addressing critical health issues. This will also aid in effectively implementing the PPM and enable the evaluation of the PPM process and outcome**.** A reliable TB Information System is an essential component to monitor programme performance and to identify and correct problems. It provides the basis for evaluating progress in achieving programme targets. Elements of the TB information system include reporting and recording, collection of epidemiological information from other sources and analysis. For recording the

most important documents are the Patient Record, the Laboratory Register and the TB Register. Accurate patient records are the prerequisite for the completion of all other documents and represents legal requirements for care of patients in response to WHO recommendations. In South Africa a simplified, district-based register has been devised. An additional tool, the electronic TB register, was successfully piloted in two provinces since 2000. This system will be expanded to the remaining provinces, together with the revised stationery. Reported data will be analyzed at all levels and proper feedback will be given to those who collect the data.

In this study the access to diagnostic facilities (which includes the possibility of contracting the services of private diagnostic facilities was recognized as key to improving service delivery. This opinion is shared with private providers in Indonesia, where they felt that subsidized quality-assured microcopy and radiology services could be good incentives for them to refer patients (WHO,2003). Watkins et al (2006) stated that in his study respondents shared the sentiment that if a positive sputum diagnosis is required for access to free treatment, improved diagnostic capabilities are needed.

There is a need for the implementation of TB management guidelines and the insurance of the quality of drugs. This includes the need for the NTP to provide formal guidelines to help local programmes structure collaborations with private health care providers and non-governmental organizations. These guidelines serve to offer a diverse group of plans for the community of private providers with options to participate in the referral, diagnosis, or treatment of patients with TB.

Private providers felt that ensuring the quality of the drugs is an important component of effective PPM. This finding was also reported in the Bali study, where private providers stated the importance of having drugs of a good standard, as this does influence patients' confidence in the quality of care in the TB programme and hence influenced their abilities to engage in such initiatives (Watkins et al, 2006). There is hence a need for an uninterrupted supply of quality-assured drugs with reliable drug procurement and distribution systems. This should be accompanied by the monitoring of the proper utilization of drugs in practice.

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Private providers felt that the provision of TB drugs should be free. This increases accessibility of treatment to all as indicated in the New Delhi study, where the distribution of drugs from the NTP to PPS for dispensing free of charge to patients positively influenced both the completion

of treatment and peoples access to treatment (Lonnroth et al, 2004). The negative impact of patients having to pay for drugs can be seen in Ho Chi Minth City, where the default rate exceeded 40%, with the main reason for defaulting, being the financial constraints of patients and in Nairobi where the prepayment of drugs excluded the poor (Lonnroth et al, 2004).

A few private providers supported the establishment of a TB diagnostic committee that will validate the interpretation of radiological findings. Whilst this is a viewpoint shared by private providers in other studies such as in the Bali study (Watkins et al, 2006), one has to consider whether this is a feasible option in a resource constraint environment like South Africa.

5.5 Limitations

In scope, this study does present some methodological and data issues. These include:

1) Sample size: The findings of this study may be limited, as the sample studied may not be representative of the population of private practitioners within Cape Town. The purpose of this study was primarily descriptive, and further research is required to systematically study the perceptions and needs of a larger number of private practitioners to inform local policy. However as this study involved face-face interviews, the study did not have the financial and human resources for a bigger sample. Also the investigator encountered reluctance on behalf of private providers to participate in the study, most of whom cited time constraints as a reason for non participation.

2) Selection Bias: As all of the participants are urban based, these findings only reflect the perceptions of private practitioners in urban settings and may hence not account for rural urban differences when it came to private providers perceptions of the enablers and barriers to effective PPM in TB control in Cape Town.

3) Participation Bias: As participants all voluntarily participated in this study. This may mean that they show more interest in PPM than those who refused to participate in the study and this could have influenced results particularly when looking at whether private providers were willing to collaborate with the public sector in the PPM initiative in TB control.

4) Recall bias: This could have occurred in private practitioners' and pharmacists' recall of the number of patients with TB who demanded care.

Despite the limitations, this study represents a reasonable starting point in engaging with private providers and getting their perceptions of what currently limits and what could promote their involvement in public health initiatives such as PPM in TB control.

CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusion

Current WHO recommendations include the need for private practitioners to be engaged in national TB strategies (WHO, 2006). Locally specific strategies are required to effectively involve private practitioners in TB control. Private providers are a heterogeneous group that provides a unique service which often complements the services provided by the public system. In this study the main stakeholders in the private sector are general practitioners, chest specialists, non allopathic private medical practitioners, private pharmacists, laboratory technicians and microbiologists. This study aimed to explore private practitioners' perceptions of the enablers and barriers within both the public and private sectors to TB control efforts in Cape Town South Africa. It explored private provider perspectives on the main components that would facilitate the use of public-private mix in the most effective manner.

The overall findings of this study have shown that most respondents felt that the responsibility for the provision of TB care lies within both the public and private sectors. There was also the view that the level of private sector involvement in combating TB should include both policy and service delivery levels.

Private providers felt that there are enablers (i.e. both direct and indirect incentives) that would facilitate their increased participation in PPM initiatives in TB control. The most common requested direct incentive was that of financial remuneration. Further direct incentives included that of training and the free supply of drugs. There were also indirect incentives to persuading private providers to collaborate in PPM initiatives and this included their improved reputation and hence increased attendance by patients and the provision of subsidized quality assured microscopy and radiological services.

In this study private providers highlighted some of the barriers within the public sector that currently limited their collaboration in PPM in TB control. These include challenges like the public sectors' prejudice about the profit motive of private providers, the public sector's inadequacy in terms of resource allocation and poor quality of services, the public sector's

reluctance to initiate collaboration and the absence of precedents and the lack of information about TB programmes.

Private providers did however also comment on the barriers within their own capacities that currently limit their involvement in PPM initiatives in TB control. This included issues such as time constraints, limitations to undertake non clinical tasks such as defaulter retrieval, social support and detailed record keeping. They also felt that within the private sector they were provided with inadequate training and orientation and that liaison and interaction with the public sector was challenging.

Private providers commented on the main components that would facilitate the use of public-private mix in the most effective manner. These included the use of appropriate contractual relationships, a strategic plan on TB with PPM as a major strategy, the provision of free drugs, the development of clear stewardship functions for PPM projects adequate financing for TB, the availability of advocacy products and the need to facilitate optimal service delivery for the implementation of TB services.

This study concludes that given the provision of the correct bundle of incentives there is willingness for private providers to be active participants within PPM initiatives in TB control. For such initiatives to commence and succeed there needs to be improved collaboration where private providers are involved in phases of both planning and implementation of PPM. Open dialogue between the sectors should aim to identify and address the current barriers and also include the identification of the incentive mechanisms that would facilitate the continued commitment and involvement of the private sector. This should however be balanced with strong government stewardship functions to manage PPs and align their practices to public health programmes.

6.2 Recommendations

The study makes the following recommendations:

1) Government should develop a phased implementation of PPM TB control initiatives: This should be done in consensus with relevant stakeholders and include the development of national operational guidelines for the involvement of private hospitals

and practitioners. This should be done, utilizing experiences of other countries. Operationally it is suggested that private sector involvement could begin in areas where DOTS implementation is satisfactory and health centres, lung clinics and public sector hospitals are operating in a co-ordinated manner. The process should include the supervision and documentation of the operational guidelines, which should assist in identifying common constraints, understanding the human and financial resources required, and help develop simple, practical tools of public-private collaboration. These guidelines and practical tools should be widely available after the necessary modifications based on experience and evidence. Whilst drawing upon experiences within other countries it is essential to ensure that context-specific models are utilized when facilitating the involvement of individual and institutional private providers. The necessary support should be provided to the health centre and clinics to implement the guidelines in phases in all areas where DOTS implementation is satisfactory. Continual education of private providers is essential and it is thus essential to collaborate with the necessary professional bodies and academic medical institutions.

2) Pilot studies should be conducted. This should include context-specific public-private mix models of TB care in diverse settings that demonstrate desirable outcomes before scaling up. The pilots should be evaluated in terms of health outcomes, cost-effectiveness, equity and quality of care. Particular attention should be paid to their sustainability.

3) There should be a clear division of tasks and assigning of responsibilities, with particular attention to close and frequent supervision is needed. Government should sign a memorandum of understanding with private providers to ensure a more structured partnership. This should include all areas of activity needed from the provider and the agreed supervision mechanisms, which should include peer reviews and a quality assurance team.

4) Training: Given the common initial distrust between PPs and NTPs, involvement of PPs needs communication to build trust. The public sector should be able to demonstrate high technical and service quality to attract the interest of both PPs and their patients. Likewise, the PPs should demonstrate that they are capable of managing TB according to DOTS principles to gain trust among public sector staff. A crucial factor in promoting

effective PPM is a change in the mindsets on the part of both sectors. It is hence equally as important to assure that NTP staff is sensitized to the PPM philosophy as sensitizing PPs to the DOTS strategy. The sustainability of any public-private mix model will depend on the ability, commitment, cooperation and communication of the government staff with private providers.

6.3 Agenda for future research

The following is suggested for further research:

1) Very little is known about the characteristics of the private sector and its performance that can be used to structure effective policies. Further research on the activities of the private sector is necessary as this will allow for less of a divergence between the objectives of the public and the private sectors. There is thus a need for precise data on:
    - the size and the utilization of the private sector as such efforts could help decide on the epidemiological impact of PPM DOTS.
    - TB diagnosis and treatment in the private sector, i.e., the management practices employed in the private sector, i.e. use of sputum microscopy for TB diagnosis/radiological examination, whether they dispense anti-TB drugs or prescribe them.

2) For effective and sustained private sector involvement, some knowledge and information gaps need addressing. These include urban-rural differences in the role of private sector in TB control, as there may be differences in the levels of effectiveness and efficiency between PPM in urban vs. PPM in rural settings.

3) There needs to be an attempt to obtain broader private sector involvement, i.e. NGO's, workplaces, traditional healers and pharmaceutical companies. Their perspectives on the factors currently limiting their participation in PPM initiatives in TB control and what mechanisms they feel government can employ, to persuade their involvement in such initiatives.

4) In light of the constrained budgets of governments within developing countries who have

to address many pressing health issues, there is a need for further cost-effectiveness studies to help justify additional input (i.e. human and material resources required to achieve desirable results).

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Appendix 1

Informed consent form for providers

I Lee-Ann Jacobs am a student of the Health Economics Unit, University of Cape Town, South Africa. Your organisation is one of those that potentially could play an important role in TB control activities/policy making in the Western Cape. We would like to request your participation in this study by agreeing to be interviewed about public/private mix issues in TB control. Your identity, and the one of the organisation you represent, will be kept confidential

I am conducting a study to explore the enablers and barriers to private sector participation in TB control in Cape Town. The study specifically seeks to explore:
1) the main stakeholders in the private sector that could be active participants in TB control in Cape Town.
2) what private providers think are the enablers and barriers to their involvement in TB control.
3) private providers perspectives on the main areas of public-private partnerships in TB control, namely policy guideline development, advocacy and information campaign, training and research and service delivery.

Furthermore, the recommendation made from this study should contribute to effective policy making, which would facilitate a better design and implementation of public-private mix in TB control.

Thank you for you cooperation.

The purpose of the study has been explained to me satisfactorily by (Name of the interviewer)…….

I understand what has been explained to me and I agree to participate in this study.

Name: ----------
Organization: ----------
Signature: _____
Date: _____

Appendix 2

QUESTIONNAIRE

This questionnaire forms part of a study that seeks to assess private providers' perspectives on the enablers and barriers to the effective use of Public-Private mix in TB control in Cape Town. During the course of the questionnaire, if there are any questions regarding specific questions, please feel free to ask the interviewer who has given you the questionnaire. If at any point you do not feel comfortable answering the questions, please mark the "decline to answer" box so that the researcher knows that the question has not been answered intentionally. Thank you for your participation in the study.

DIRECTIONS: This is a self-administered questionnaire. Please fill in the requested information on the line or mark (✔ or ✕) the appropriate answer. Remember that the information obtained on this questionnaire will be treated with the utmost confidentiality and will be used to implement more effective partnerships between the public and private sectors in TB control in Cape Town.

DEMOGRAPHIC INFORMATION

1) Date of Interview _____

2) Study number _____

3) How old are you (in years) ?

_____ ☐ decline to answer

4) Please indicate your gender.

☐ Male

☐ Female ☐ decline to answer

5) In which geographical area do you work?

_____ ☐ decline to answer

6) Please indicate the highest level of education that you have completed

☐ Primary school

☐ Secondary school

☐ No formal education

☐ Undergraduate degree/diploma

☐ Masters degree

☐ PHD

☐ Other: Specify _____ ☐ decline to answer

7) How would you describe the setting in which you work?

☐ Private Practice

☐ Small Private Hospital (>80 bed capacity)

☐ Big Private Hospital (medical centre with 80/more beds)

☐ Occupational Clinic

☐ Pharmacy

☐ Pharmaceutical manufactory

☐ NGO

☐ Other: Specify _____ ☐ decline to answer

8) Do you work in both the private and public health sectors?

☐ Yes

☐ No ☐ decline to answer

9) Do you see any TB patients in your practice?

☐ Yes

☐ No ☐ decline to answer

If yes: how many per month?_____

If no: why not? _____

PRIVATE PROVIDERS' PERSPECTIVE ON PUBLIC-PRIVATE COLLABORATION IN TB CARE PROVISION

10) With whom do you think the responsibility of the provision of TB care lies?

☐ the public sector

☐ the private sector

☐ both the public and private sectors ☐ decline to answer

Why: _____

11) At what level do you think the private sector should be involved in the provision of TB care?

☐ policy level

☐ service delivery level

☐ both policy and service delivery levels

☐ Other: Specify _____ ☐ decline to answer

12) Would you consider collaborating with the public sector to address TB in Cape Town?

☐ yes

☐ no ☐ decline to answer

13) Please select which of the following direct incentives may persuade you to collaborate with the public sector to combat TB in Cape Town?

☐ financial

☐ free supply of TB drugs

☐ training/continued education with regards to the philosophy of PPM and the DOTS programme

☐ other: specify_____ ☐ decline to answer

14) For your involvement in PPM in TB care provision, what would be an acceptable form of financial remuneration?

☐ fee for service

☐ per capita (payment per patient within catchment population)

☐ salary

☐ no financial remuneration expected

☐ other: specify_____ ☐ decline to answer

15) Please select which of the following indirect incentives may persuade you to collaborate with the public sector to provide TB care in Cape Town?

☐ your improved reputation in the community and thereby increased attendance.

☐ subsidized quality- assured microscopy and radiological services

☐ other: specify_____ ☐ decline to answer

16) Are there any barriers that currently prevent you from collaborating with the public sector to address TB in Cape Town?

☐ Yes

☐ No ☐ decline to answer

17) Please select which barriers in the public sector prevent you from collaborating with the public sector to provide TB care in Cape Town:

☐ prejudices about the profit motive and the behaviour of private providers

☐ great reluctance to initiate collaboration

☐ public sector is underfunded and offers low quality service

☐ absence of precedents and lack of sufficient information about TB programmes

☐ weak or absent regulatory mechanisms

☐ poor referral and information systems

☐ poor defaulter retrieval

☐ poor quality of drugs and regulation supply of drugs in healthcare centres

☐ poor quality of smear microscopy

☐ other: specify_____ ☐ decline to answer

18) Please select which barriers in the private sector prevent you from collaborating with the public sector to combat TB in Cape Town:

☐ inadequate training and orientation

☐ time constraints to participate in sensitization and training programmes

☐ doubts about quality of care within NTP (National Treatment Programme)

☐ liaison and interaction challenging

☐ not remunerative

☐ genuine limitations to undertake non-clinical tasks such as defaulter retrieval, social support and detailed record keeping and analysis

☐ other: specify_____ ☐ decline to answer

19) WHO has identified the important components of the partnership between the public and the private sector.

19.1) What conditions in policy and guideline development would you say is required for effective Public-Private Mix collaboration?

☐ a strategic plan on TB that includes PPM as a major strategy (clear and detailed guidelines on how to involve different provider types, with clear treatment regimes which comply with national and international guidelines. Including uniform recording and reporting systems)

☐ the development of clear stewardship functions for PPM projects (a clear division of tasks and assignment of responsibilities with a particular attention on supervision)

☐ adequate financing for TB services through multi year budget (government should finance drug costs and cost of the staff for supervision, monitoring and evaluation activities.)

☐ the provision of free drugs

☐ appropriate contractual relationships and financial arrangements with private providers who opt to be active participants in PPM in TB care provision

☐ other: specify_____ ☐ decline to answer

19.2) What conditions in advocacy and information campaign would you say are necessary for effective Public-Private Mix collaboration?

☐ initiatives such as World TB day and an annual national information campaign

☐ the availability of advocacy products (i.e. National level success stories of PPM Dots, Information on "what is PPM Dots?", Information on Dots generic as well as country specific documents, and initiatives such as "TB at the workplace")

☐ other: specify_____ ☐ decline to answer

19.3) What conditions in training and research would you say are essential for effective Public-Private Mix collaboration?

☐ incorporate DOTS in undergraduate and postgraduate medical education

☐ orientation/training causes on TB and DOTS for private providers

☐ other: specify_____ ☐ decline to answer

19.4) What conditions in service delivery would you say are necessary for effective Public-Private Mix collaboration?

☐ free TB drugs

☐ implementation of TB drug management guidelines and ensure that the quality of locally produced/procured TB drugs meet international standards.

☐ access to diagnostic facilities (which includes the possibility of contracting the services of private diagnostic facilities)

☐ the establishment of a TB diagnostic committee to validate the interpretation of radiological findings.

☐ improved referral and information systems

☐ other: specify_____ ☐ decline to answer

Thank you for your time.